

COMPENSATORY MITIGATION
AND PUBLIC LANDS

JUSTIN R. PIDOT

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Abstract: The Bureau of Land Management (BLM) manages America's public lands for a multiplicity of uses and values. This effort requires difficult tradeoffs, because allowing one use, like oil drilling, will displace others, like recreation or wildlife habitat. Compensatory mitigation—the practice of requiring land users to offset their environmental harms—provides an important mechanism for addressing use conflicts, by enabling intensive development in designated areas, while conserving the ecological integrity of public lands as a whole. Despite its potential to balance competing interests in public lands, compensatory mitigation has come under fire. Former Interior Secretary Ryan Zinke described compensatory mitigation as “un-American” and “extortion,” and under his leadership, the BLM disclaimed authority to require it, never mind that the agency had done so for decades. The policy has persisted under the leadership of Secretary David Bernhardt. This Article examines the history of public land law, the development of environmental mitigation policies across the federal government, and three interlocking provisions of Federal Land Policy and Management Act of 1976—the Multiple Use Mandate, the Land Use Planning Mandate, and the Anti-Degradation Mandate—to reveal that the BLM has ample authority to require compensatory mitigation. It then assesses the circumstances in which resource users can appropriately be required to offset the impacts of their uses.

INTRODUCTION

America's public lands are as diverse as its people. They include rugged mountains, pristine lakes, and ancient forests; ski resorts, world-class white-water rivers, and off-road vehicle destinations; battlefields, modern-day memorials, and archeological sites documenting millennia of human habitation; wildlife habitat and ecosystems that function as carbon sinks and water supply;

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open-pit mines, oil fields, wind farms, and cattle pasturage.¹ Americans view public lands from similarly diverse perspectives: they may represent economic opportunity to a miner, tradition to a rancher, the ultimate playground to a dirt bike enthusiast, and a solemn moral obligation to a preservationist. Public lands include hallowed grounds for many Native American tribes and provide opportunities for their members to engage in traditional hunting, gathering, cultural, and religious activities passed down from time immemorial.²

The federal government has recognized these interests to varying degrees over its history. Under the Property Clause of the U.S. Constitution, Congress wields plenary power over public lands,³ and as the Supreme Court explained at the turn of the twentieth century, the United States holds them “in trust for the people of the whole country.”⁴ The federal government has often fallen far short of that lofty aspiration, taking a crabbed view of *who* should be considered and for *what* purposes. Corruption, racism, ignorance, and neglect have sometimes been the rule rather than the exception, as the United States seized the traditional homelands of Native American tribes and, for many years, sold or gave away those lands to predominantly white settlers, corporations, and land speculators.⁵ At the direction of Congress, more than one billion acres of public lands were transferred out of federal ownership to state governments, businesses, and individuals.⁶

¹ See, e.g., U.S. Public Land Law Review Comm’n, *One Third of the Nation’s Land* 28–29 (1970) [hereinafter *One Third of the Nation’s Land*] (describing the “great diversity” of public lands).

² See, e.g., Proclamation No. 9558, 82 Fed. Reg. 1139 (Jan. 5, 2017).

³ U.S. CONST. art. IV, § 3, cl. 4 (“The Congress shall have power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States”); see *Cal. Coastal Comm’n v. Granite Rock Co.*, 480 U.S. 572, 581 (1987) (“[T]he Property Clause gives Congress plenary power to legislate the use of the federal land”). Although Congress’s authority is plenary, it is not always exclusive. States may regulate public lands so long as they do not conflict with federal law. *Cal. Coastal Comm’n*, 480 U.S. at 593.

⁴ *Light v. United States*, 220 U.S. 523, 537 (1911) (quoting *United States v. Trinidad Coal Co.*, 137 U.S. 160, 170 (1890)); see *id.* at 536 (“It is true that the ‘United States do not and cannot hold property as a monarch may, for private or personal purposes.’” (quoting *Van Brocklin v. Anderson*, 117 U.S. 151, 158 (1886))).

⁵ See, e.g., Trina Williams Shanks, *The Homestead Act: A Major Asset-Building Policy in American History*, in *INCLUSION IN THE AMERICAN DREAM: ASSETS, POVERTY, AND PUBLIC POLICY* 20, 34 (Michael Sherraden ed., 2005) (“Ironically, black men who served on the Union side during the war and even remained enlisted as Buffalo Soldiers to help protect settlers on the frontier from outlaws and Indian attacks were denied the opportunity to make land claims in some of the very communities they fought to defend.”); Eric Kades, *The Dark Side of Efficiency: Johnson v. M’Intosh and the Expropriation of American Indian Lands*, 148 U. PA. L. REV. 1065, 1068 (2000) (“One of the most critical deprivations that the American Indians suffered at the hands of the United States was the loss of their lands.”).

⁶ See BUREAU OF LAND MGMT., U.S. DEP’T OF THE INTERIOR, *PUBLIC LAND STATISTICS* 2017, at 5 (2018) [hereinafter *PUBLIC LAND STATISTICS*] (identifying disposition of almost 1.3 billion acres between 1781 and 2017); Comment, *Management of Public Land Resources*, 60 YALE L.J. 455, 458 (1951).

Until the end of the nineteenth century, the dominant paradigm of public land law remained privatization.⁷ As the Progressive Era of American politics dawned, Congress began to adjust course, deciding—in fits and starts—that public lands should remain in federal ownership and be managed for the benefit of the public, rather than for private profit.⁸ In 1976, Congress enacted the Federal Land Policy and Management Act (FLPMA) as a paragon of this new course.⁹ FLPMA is sometimes referred to as the organic act of the Bureau of Land Management (BLM).¹⁰ The BLM manages over one-tenth of the total surface area of the United States and almost one-third of minerals and soils, more than any other federal agency.¹¹ It generally directs that “public lands be retained in Federal ownership” and be managed for “multiple use and sustained yield” that “will best meet the present and future needs of the American people.”¹²

Multiple use management requires tradeoffs.¹³ An area of public lands may be rich in oil resources, biodiversity, and recreational opportunities. Designating the area for drilling will displace trails. Drilling and intensive recreation may frighten wildlife or degrade the quality of habitat.¹⁴ To be sure, management decisions need not always be absolute.¹⁵ Perhaps, with careful planning, oil companies, recreationists, and wildlife can all be accommodated, at least to an extent. For example, placing drilling rigs at concealed spots may reduce harm to hikers seeking natural vistas and restricting operations at sensi-

⁷ See Leigh Raymond & Sally K. Fairfax, *The “Shift to Privatization” in Land Conservation: A Cautionary Essay*, 42 NAT. RESOURCES J. 599, 602 (2002) (discussing history of public land law).

⁸ See *infra* Part II.A.

⁹ Pub. L. No. 94-579, 82 Stat. 197 (1976) (codified as amended at 43 U.S.C. §§ 1701–1787 (2018)). FLPMA did not, however, entirely end privatization of public lands because it left largely in place the rights of prospectors to claim certain mineral resources on public lands under the 1872 Mining Law, 30 U.S.C. § 22 (2018), and established new mechanisms for land exchanges and sales in narrow circumstances. See 43 U.S.C. §§ 1713, 1716.

¹⁰ See Michael Burger, *A Carbon Fee as Mitigation for Fossil Fuel Extraction on Federal Lands*, 42 COLUM. J. ENVTL. L. 295, 316–17 (2017) (describing FLPMA and “BLM’s Organic Act”); Eleanor R. Schwartz, *A Capsule Examination of the Legislative History of the Federal Land Policy and Management Act of 1976*, 21 ARIZ. L. REV. 285, 285 (1979) (describing FLPMA as “much more than an organic act”).

¹¹ See U.S. GEN. ACCOUNTING OFFICE, *FEDERAL LANDS: INFORMATION ON LAND OWNED AND ON ACREAGE WITH CONSERVATION RESTRICTIONS* 8 (1995); *Our Mission*, BUREAU OF LAND MGMT., <https://www.blm.gov/about/our-mission> [<https://perma.cc/CHR6-NY7C>].

¹² 43 U.S.C. § 1701(a)(1); see also *id.* § 1701(a)(7) (establishing national policy for public land management); *id.* § 1702(c) (defining “multiple use”).

¹³ See, e.g., *W. Energy All. v. Zinke*, 877 F.3d 1157, 1169 (10th Cir. 2017) (noting that “under the multiple-use mandate,” the BLM “is required to balance wide-ranging and often conflicting interests”).

¹⁴ See, e.g., *Theodore Roosevelt Conservation P’ship v. Salazar*, 616 F.3d 497, 505–06 (D.C. Cir. 2010) (addressing mitigation measures designed to address oil and gas development’s harm to wildlife).

¹⁵ For examples of the Obama Administration’s effort to use compensatory mitigation as a component of public land management, see *infra* notes 107–116 and accompanying text.

tive times of year or closing hiking trails during mating season may reduce wildlife disturbance. Careful management decisions, then, can overcome what may appear to be a zero-sum game in which some uses of public lands must be sacrificed so others can flourish. Each use may suffer to a degree—because some lands are either unavailable or less desirable and activities must conform to restrictions. But all can also occur to some extent, creating the potential for greater net social benefit than dedicating the area to a single use.

Serious limitations exist, however, on the extent to which carefully structuring activities can reconcile conflicts. No matter the steps taken, using public lands will often degrade them, sometimes a great deal. Constructing an open-pit phosphate mine in sagebrush country is simply incompatible with sage-grouse convening for their famed mating rituals at locations within the area of excavation. Mining also prevents other commercial use—like ranching of the lands occupied—at least unless and until successful reclamation occurs decades in the future. These conflicts, what might be called absolute use conflicts, would appear to present public land managers with a binary option set. For example, they can allow mining to the detriment of wildlife or foreclose mining to the detriment of the enterprise seeking access to minerals. Absolute use conflicts like this one transcend the divide between traditional, resource interests and environmental and recreational interests, because activities that are themselves viewed as environmentally desirable may simultaneously degrade the land. For example, large-scale solar power facilities may advance climate policy but disturb desert ecosystems, including habitat for threatened desert tortoise, and heat from them can kill the unfortunate bird or bat that passes overhead.¹⁶

The appearance that absolute conflicts can only be resolved by authorizing or denying permission for a particular use is, however, an illusion, at least sometimes. Such an illusion results from an atomistic view of public lands and narrow thinking about the array of possibilities available to land managers. Ecosystems function as landscapes, not as individual tracts in isolation, and it may be possible to offset harm in one place by improving another. In the parlance of environmental law, such offsets are called compensatory mitigation, and in a fashion that can fairly be described as both inconsistent and ad hoc, public land managers have relied upon this mechanism to both allow intensive

¹⁶ See Amy Wilson Morris & Jessica Owley, *Mitigating the Impacts of the Renewable Energy Gold Rush*, 15 MINN. J.L. SCI. & TECH. 293, 297–98 (2014); REBECCA A. KAGAN ET AL., AVIAN MORTALITY AT SOLAR ENERGY FACILITIES IN SOUTHERN CALIFORNIA: A PRELIMINARY ANALYSIS 1–2 (2014), <https://alternativeenergy.procon.org/sourcefiles/avian-mortality-solar-energy-ivanpah-apr-2014.pdf> [<https://perma.cc/DC3C-P92A>] (reporting data on mortality caused by solar projects).

land use and ensure overall ecological vibrancy.¹⁷ For example, an oil company seeking to drill within the migration route of Wyoming's pronghorn antelope could be required to build a wildlife overpass across a nearby road or remove or replace fencing that impedes passage.¹⁸ Doing so would at least partially compensate for the harm of drilling.

Compensatory mitigation is not, however, a panacea for the problems that dog public land management. Some harms cannot be rectified. Purporting to compensate for them will be ineffective at best and a grievous insult to those whose interests are impaired at worst. Imagine the BLM approving construction of a wind farm in the Badger-Two Medicine area of Montana, which is profoundly sacred to the Blackfeet Nation.¹⁹ Restoring other public lands would not assuage the grievous injury experienced by the Tribe. A deficit in scientific understanding or technical capacity may impair or entirely thwart other efforts.²⁰ Compensatory mitigation that lies beyond current technical knowledge will fail, engendering cynicism among the business community and the public.

Compensatory mitigation has featured prominently in other environmental contexts, serving as the cornerstone of Clean Water Act permits for filling wetlands and other waters and Endangered Species Act incidental take permits.²¹ Although not without their failures, these programs arose from a need for innovation, regulatory flexibility, and compromise.²² They have spawned a vibrant and growing community of companies that implement mitigation pro-

¹⁷ The BLM's 1988 plan for conserving desert tortoise represents an example of the agency adopting a "no net loss" standard to govern compensatory mitigation for activities within the habitat of an unlisted species. See BUREAU OF LAND MGMT., DESERT TORTOISE MGMT. OVERSIGHT GRP., FINAL REPORT: COMPENSATION FOR THE DESERT TORTOISE I (1991), <https://tortoise.org/conservation/hastey1991.pdf> [<https://perma.cc/GJ7E-F4JT>] (describing need for compensatory mitigation to implement no net loss policy of 1988 Desert Tortoise Habitat Management plan); see also Instruction Memorandum No. AZ-2012-031 from State Director to District Managers & Field Managers (June 14, 2012), <https://www.blm.gov/policy/im-az-2012-031> [<https://perma.cc/CF67-JDYZ>].

¹⁸ See, e.g., *United States ex rel. Bergen v. Lawrence*, 620 F. Supp. 1414, 1416 (D. Wyo. 1985) (ordering a rancher to replace fencing that prevents passage of pronghorn antelope).

¹⁹ See Jesse DesRosier, Opinion, *Safeguard Badger Two Medicine Land*, GREAT FALLS TRIB., Aug. 25, 2015, at A4. DesRosier is a member of the Blackfeet Nation, a Native American tribe that has fought to prevent oil companies from drilling in the Badger-Two Medicine area. *Id.*

²⁰ See NAT'L RESEARCH COUNCIL, COMPENSATING FOR WETLAND LOSSES UNDER THE CLEAN WATER ACT 7 (2001) (noting difficulty of creating fens and bogs).

²¹ See 16 U.S.C. § 1539 (2018) (authorizing incidental take permits); 33 U.S.C. § 1344 (2018) (authorizing permits for dredged and fill material).

²² See, e.g., Bruce Babbitt, *The Endangered Species Act and "Takings": A Call for Innovation Within the Terms of the Act*, 24 ENVTL. L. 355, 366 (1994); Dave Owen, *The Conservative Turn Against Compensatory Mitigation*, 48 ENVTL. L. 265, 269 (2018) ("Compensatory mitigation emerged because it has the potential to address real needs."). For a framework to evaluate the appropriateness and effectiveness of environmental markets, see generally Michael Pappas & Victor B. Flatt, *The Costs of Creating Environmental Markets: A Commodification Primer*, 9 U.C. IRVINE L. REV. 731 (2019).

jects to generate credits for sale, resulting in the attendant benefits and detriments of harnessing the marketplace to address environmental problems.²³ The BLM has lagged in developing an effective, consistent, and predictable compensatory mitigation program, but addressing use conflicts on public lands presents similar needs and demands a similar spirit of innovation.

During the Obama Administration, the BLM set itself to this task, drawing on lessons from other agencies. The Department of the Interior adopted a landscape mitigation policy, orienting the BLM and other components toward considering ecosystems, rather than individual projects on a case-by-case basis.²⁴ The BLM incorporated compensatory mitigation as a component of its Desert Renewables Energy Conservation Plan (DRECP) to guide development of alternative energy resources in the California desert.²⁵ And the BLM and the U.S. Forest Service relied upon compensatory mitigation as a key component of conservation plans for the greater sage-grouse, which were instrumental to the U.S. Fish and Wildlife Service deciding not to initiate a listing under the Endangered Species Act.²⁶ The greater sage-grouse conservation plans, in turn, led states and private companies to develop innovative mechanisms to create economic certainty for the business community and ecological certainty for the bird.²⁷

The Trump Administration has taken a radically different approach. Former Interior Secretary Ryan Zinke called compensatory mitigation “un-American,” describing it as an act of “extortion.”²⁸ In July 2018, the BLM issued an “In-

²³ See Jessica Owley, *The Increasing Privatization of Environmental Permitting*, 46 AKRON L. REV. 1091, 1118–25 (2013) (discussing concerns about privatized mitigation); Elan L. Spanjer, Note, *Swamp Money: The Opportunity and Uncertainty of Investing in Wetland Mitigation Banking*, 113 NW. U. L. REV. 371, 382–87 (2018) (discussing rise of for-profit wetlands mitigation banks).

²⁴ See Sally Jewell, Sec’y, U.S. Dep’t of the Interior, Secretarial Order No. 3330 (Oct. 31, 2013) [hereinafter Secretarial Order No. 3330].

²⁵ See BUREAU OF LAND MGMT., DESERT RENEWABLE ENERGY CONSERVATION PLAN RECORD OF DECISION 6–7 (2016) [hereinafter DRECP ROD], https://energyarchive.ca.gov/drecp/finaldrecp/rod/DRECP_BLM_LUPA_ROD.pdf [<https://perma.cc/FB8D-3C3V>].

²⁶ See Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to List Greater Sage-Grouse (*Centrocercus urophasianus*) as an Endangered or Threatened Species, 80 Fed. Reg. 59,858, 59,858 (Dep’t of the Interior Oct. 2, 2015) [hereinafter Greater Sage-Grouse Finding] (notice of finding); U.S. FOREST SERV., MYTHS V. FACTS: GREATER SAGE-GROUSE CONSERVATION STRATEGY 1 (Sept. 22, 2015), https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3855690.pdf [<https://perma.cc/838B-W6Z5>].

²⁷ See, e.g., Justin R. Pidot, *Public-Private Conservation Agreements and the Greater Sage-Grouse*, 39 PUB. LAND & RESOURCES L. REV. 165, 186–88 (2018).

²⁸ See Jennifer Yachnin, *Zinke Vows to Restore ‘Breaches,’ Keep NPS Despite Reorg*, E&E NEWS PM (June 27, 2017), <https://www.eenews.net/eenewspm/stories/1060056675> [<https://perma.cc/7SHW-C2U8>]. For an analysis of another Trump Administration initiative to limit settlements incorporating payments for projects designed to offset harms caused by environmental violations, see Seema M. Kakade, *Remedial Payments in Agency Enforcement*, 44 HARV. ENVTL. L. REV. (forthcoming), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3361746 [<https://perma.cc/2L7D-NBCR>].

struction Memorandum”—a policy document for BLM staff—that categorically forbids the use of compensatory mitigation.²⁹ This policy parrots the view of Secretary Zinke and tersely proclaims that the BLM lacks statutory authority under FLPMA to impose compensatory mitigation even though the agency has been doing so for decades.³⁰ BLM has persisted in this policy under the leadership of Secretary David Bernhardt.³¹ Put differently, this new policy asserts that the BLM can’t require compensatory mitigation, not that it shouldn’t.

This change in course reflects a broader reorientation in environmental law. The Trump Administration has distanced itself from the economic principles that have historically underlaid conservative critiques of environmental protection and accompanying calls for the use of cost-benefit analysis to animate federal policymaking.³² Instead, the focus has shifted solely to the cost side of the equation, divorced from any assessment of benefits.³³ When regulations cost too much, they are cast as burdens on economic activities, irrespective of the benefits they produce.³⁴ Through that lens, compensatory mitigation is just another regulatory burden for the chopping block, rather than a market corrective resulting in a more efficient allocation of resources.

²⁹ Instruction Memorandum from Deputy Dir. for Policy & Programs, Bureau of Land Mgmt., to Assistant Dirs. & All Field Office Officials, Bureau of Land Mgmt. (July 24, 2018) [hereinafter July 2018 Instruction Memorandum], <http://sagebrushco.nv.gov/uploadedFiles/sagebrushcoconvgov/content/Meetings/2018/IM2018-093%20Compensatory%20Mitigation.pdf> [<https://perma.cc/TG4W-ZPBC>]. See generally Justin R. Pidot, *The Bureau of Land Management’s Infirm Compensatory Mitigation Policy*, 30 FORDHAM ENVTL. L. REV. 1 (2018). The BLM reissued a slightly modified version of the instruction memorandum on December 6, 2018. Memorandum from Deputy Dir. for Policy & Programs, Bureau of Land Mgmt., to Assistant Dirs. et al., Bureau of Land Mgmt. (Dec. 6, 2018) [hereinafter Dec. 2018 Modified Memorandum], <https://www.blm.gov/policy/im-2019-018> [<https://perma.cc/9PLX-VSLB>].

³⁰ See Pidot, *supra* note 29, at 2.

³¹ See, e.g., BUREAU OF LAND MGMT., OREGON GREATER SAGE-GROUSE: RECORD OF DECISION AND APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT 1-4 (2019), https://eplanning.blm.gov/epl-front-office/projects/lup/103348/168708/205327/2019_Oregon_GRSR_ROD_ARMPA.pdf [<https://perma.cc/J8PM-B8BF>] (amending land use plan due to “BLM’s determination that [FLPMA] . . . does not explicitly mandate or authorize the BLM to require public land users to implement compensatory mitigation as a condition of obtaining authorization for the use of BLM-administered lands”).

³² See Richard J. Lazarus, *The Greening of America and the Graying of United States Environmental Law: Reflections on Environmental Law’s First Three Decades in the United States*, 20 VA. ENVTL. L.J. 75, 93 (2001) (describing the conservative push to replace “environmental standards based on minimum standards of human health and technology-forcing requirements . . . [with] environmental standards based on cost/benefit analyses, comparative risk assessment, and other economic efficiency criteria”).

³³ See Richard L. Revesz, *Congress and the Executive: Challenging the Anti-Regulatory Narrative*, 2018 MICH. ST. L. REV. 795, 818.

³⁴ See, e.g., U.S. DEP’T OF THE INTERIOR, FINAL REPORT: REVIEW OF THE DEPARTMENT OF THE INTERIOR ACTIONS THAT POTENTIALLY BURDEN DOMESTIC ENERGY 8 (2017) [hereinafter DOI ACTIONS], https://www.doi.gov/sites/doi.gov/files/uploads/interior_energy_actions_report_final.pdf [<https://perma.cc/SPL3-N5JS>] (describing BLM rule regulating venting and flaring of natural gas on public lands that “poses a substantial burden on industry” without evaluating benefits produced).

Put differently, historic contestation over environmental protection largely addressed instrument selection—*how* should we protect the environment—rather than the ultimate goal—*whether* we should protect the environment. Political leaders across the ideological landscape embraced goals of clean air, healthy watersheds, vibrant ecosystems, and the preservation of imperiled species.³⁵ After all, wetlands preservation served as a cornerstone of President George H.W. Bush’s campaign for president in 1988, which led to the establishment of the federal policy of “no-net loss” of wetlands, adherence to which was expressed by every subsequent administration prior to the Trump Administration.³⁶

The American people continue to broadly support environmental protection: a 2017 poll found that nearly three-quarters of adults believe that “the country should do whatever it takes to protect the environment,” including fifty-two percent of Republicans.³⁷ But politics in Washington, D.C. have changed. This Article responds to the current political landscape through a deep examination of FLPMA. It explains why, contrary to the BLM’s current view, the statute provides ample authority to require compensatory mitigation. It also explains why this tool for public land management should not be abandoned, despite its limitations.

Recognizing the authority provided by FLPMA is important because FLPMA establishes the framework for the management of more federal property than any other statute, and public lands serve as the linchpin for many conservation efforts in the western United States.³⁸ Other laws may authorize compensatory mitigation when connected to specific land uses, for example the development of leasable minerals under the Mineral Leasing Act.³⁹ But as

³⁵ See, e.g., Shalanda Baker et al., *Beyond Zero-Sum Environmentalism*, 47 ENVTL. L. REP. 10,328, 10,336 (2017) (“When the U.S. Congress passed the major pollution-control laws in the 1970s, it was responding to a growing consensus that federal environmental regulations were essential to protection of human health and the environment.”).

³⁶ See J.B. Ruhl & James Salzman, *Gaming the Past: The Theory and Practice of Historic Baselines in the Administrative State*, 64 VAND. L. REV. 1, 2–4 (2011) (describing the adoption of “no net loss” as a component of George H.W. Bush’s campaign and adherence to that principle in subsequent administrations through the Obama Administration). Although the Trump Administration has not formally repudiated the no-net-loss goal, its proposal to redefine the scope of Clean Water Act Jurisdiction—referred to as the “Waters of the United States” rule—would place significant constraints on the ability of federal agencies to protect wetlands. See Coral Davenport, *Trump Prepares to Unveil a Vast Reworking of Clean Water Protections*, N.Y. TIMES (Dec. 10, 2018), <https://www.nytimes.com/2018/12/10/climate/trump-clean-water-rollback.html> [https://perma.cc/2TQB-ZUUL].

³⁷ Monica Anderson, *For Earth Day, Here’s How Americans View Environmental Issues*, PEW RES. CTR. (Apr. 20, 2017), <http://www.pewresearch.org/fact-tank/2017/04/20/for-earth-day-heres-how-americans-view-environmental-issues/> [https://perma.cc/TTG9-QSPY].

³⁸ See U.S. GEN. ACCOUNTING OFFICE, *supra* note 11, at 8.

³⁹ See 30 U.S.C. § 226(g) (2018) (authorizing regulation of surface-disturbing activities); Boesche v. Udall, 373 U.S. 472, 477–78 (1963) (explaining that the Mineral Leasing Act delegates “broad

the Chairman of the Senate Committee on Energy and Natural Resources explained, under FLPMA, “[f]or the first time in the long history of the public lands, one law provides comprehensive authority and guidelines for the administration and protection of the Federal lands and their resources.”⁴⁰ By exercising this cross-cutting authority, the BLM can develop and implement consistent, integrated compensatory mitigation to account for all of the uses within a landscape.

Evaluating FLPMA is also important because the law resembles other legal frameworks that do, or could, include compensatory mitigation. The National Forest Management Act, which governs national forests, shares many of FLPMA’s features, and the logic of the argument offered in this Article can easily extend to the U.S. Forest Service.⁴¹ Although the structures of more traditional environmental laws like the Clean Water Act and Endangered Species Act considerably diverge, those laws generally include no greater express authorization for compensatory mitigation.⁴² Put differently, if FLPMA doesn’t authorize compensatory mitigation, it’s not clear why the instrument would be permissible under those laws.

To accomplish these tasks, this Article proceeds in four Parts. Part I describes compensatory mitigation, identifying its antecedents from other legal contexts, and its shifting role in public land management.⁴³ Part II describes the evolution of public land law, because understanding FLPMA’s place in that history provides important analytic guideposts.⁴⁴ Part II also describes three primary mandates imposed by FLPMA to guide public land management: the Land Use Planning Mandate, the Multiple Use Mandate, and the Anti-Degradation Mandate.⁴⁵ Part III catalogues the array of land management deci-

authority” to issue “rules and regulations governing in minute detail all facets of the working of the land”). Federal agencies must also evaluate mitigation measures as a component of the environmental review process established by the National Environmental Policy Act (NEPA). *See* 40 C.F.R. § 1502.14(f) (2019). Nonetheless, courts have construed NEPA to impose purely procedural, rather than substantive, requirements. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349–51 (1989) (raising questions about whether NEPA could constitute an affirmative source of authority to require compensatory mitigation).

⁴⁰ S. COMM. ON ENERGY & NAT. RESOURCES, 95TH CONG., LEGISLATIVE HISTORY OF THE FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976, at vi (Comm. Print 1978) [hereinafter LEGISLATIVE HISTORY OF FLPMA] (providing the cover memorandum prepared by Senator Henry M. Jackson).

⁴¹ Pub. L. No. 94-588, 90 Stat. 2949 (codified as amended in scattered sections of 16 U.S.C.).

⁴² 16 U.S.C. §§ 1531–1544 (2018); 33 U.S.C. §§ 1251–1387 (2018).

⁴³ *See infra* notes 52–132 and accompanying text.

⁴⁴ *See infra* notes 133–222 and accompanying text.

⁴⁵ The Anti-Degradation Mandate does not, as will be discussed, prohibit all environmental degradation, but rather only “unnecessary and undue degradation.” *See* 43 U.S.C. § 1732(b) (2018). This is sometimes referred to as “UUD.” *See Mineral Policy Ctr. v. Norton*, 292 F. Supp. 2d 30, 34 (D.D.C. 2003).

sions made by the BLM and explains how FLPMA's trio of mandates authorizes the use of compensatory mitigation across a range of decisions.⁴⁶ This Part then argues that the BLM should not receive deference for its current, contrary view disclaiming authority. Having demonstrated that compensatory mitigation is a lawful component of the land manager's portfolio, Part IV describes its potential benefits and identifies considerations that should guide assessment of whether and how to use it.⁴⁷

Others have noted the falling political fortunes of compensatory mitigation, leading Professor Dave Owen to worry that having lost support among conservatives and liberals alike, it "may now occupy a position analogous to a politician whose coalition is just a little too small."⁴⁸ Yet, public lands have often fostered consensus, even in divisive times. Even now. Soon after the longest government shutdown in American history,⁴⁹ with Congress and the President embroiled in a vicious battle over border security,⁵⁰ the Senate voted ninety-two to eight in favor of "the most sweeping conservation legislation in a decade" to protect millions of acres of public lands.⁵¹

Compensatory mitigation offers an opportunity to bridge ideological divides and find practical, meaningful solutions to pressing problems on public lands. The BLM has the legal authority to deploy this technique. It should not neglect the chance to forge consensus, develop natural resources, and ensure that future generations inherit healthy and productive public lands.

I. COMPENSATORY MITIGATION IN CONTEXT

Compensatory mitigation has become an integral component of environmental law, but the concept did not originate there. Its antecedents in common law and land use planning inform its potential, its limitations, and how it nests within statutory schemes, like FLPMA, where agencies have deployed it. This Part illustrates that history and the rise of compensatory mitigation in environmental law more generally. It closes with a discussion of the shifting views

⁴⁶ See *infra* notes 223–318 and accompanying text.

⁴⁷ See *infra* notes 319–391 and accompanying text.

⁴⁸ Owen, *supra* note 22, at 268.

⁴⁹ Julie Bosman, *How the Shutdown Reordered American Life*, N.Y. TIMES (Jan. 26, 2019), <https://www.nytimes.com/2019/01/26/us/government-shutdown-over.html> [<https://perma.cc/85NA-DGG6>].

⁵⁰ Emily Cochrane & Catie Edmondson, *Trump, Inching Toward Border Security Deal, Says Shutdown Would Be 'Terrible'*, N.Y. TIMES (Feb. 13, 2019), <https://www.nytimes.com/2019/02/13/us/politics/government-shutdown-donald-trump.html> [<https://perma.cc/7EUF-PGED>].

⁵¹ Juliet Eilperin & Dino Grandoni, *The Senate Just Passed the Decade's Biggest Public Lands Package. Here's What's in It.*, WASH. POST (Feb. 12, 2019), <https://www.washingtonpost.com/climate-environment/2019/02/12/senate-just-passed-decades-biggest-public-lands-package-heres-whats-it/> [<https://perma.cc/5LDB-NY4C>].

of compensatory mitigation on public lands and how they fit within a broader sea-change in the American political landscape.

A. Locating Mitigation as a Doctrine to Offset Harm

The concept of mitigation predates its deployment as a tool to ameliorate environmental harm. Most future lawyers encounter it in required first-year courses, including contracts, and most relevant to public lands, property. In those fields, mitigation—and in general the term is used without a qualifier—has differing but related meanings due to the various interests at stake and roles of government institutions. In each, however, mitigation relates to acts that reduce “how harmful, unpleasant, or seriously bad a situation is.”⁵²

In contracts law, the mitigation doctrine identifies circumstances in which parties must engage in “self-help” to reduce the damage they suffer from a counter-party’s breach.⁵³ More generally, courts recognize that the damages otherwise owed to a plaintiff should be reduced where mitigation measures have offset the damage done, on the theory that civil remedies are generally compensatory in nature.⁵⁴ This common law concept closely resembles compensatory mitigation in environmental law because it presumes that harm occurs and obliges parties to take steps to offset it.

In property law, students learn about mitigation in a context even more closely analogous to environmental mitigation, although using the terminology of exactions rather than mitigation. Since the turn of the twentieth century, land use planning has served to define the private rights attendant to the ownership of real property. In its earliest manifestations, comprehensive zoning codes were prohibitory in nature, designating the land uses permitted within the geographical zones of a jurisdiction. As the U.S. Supreme Court explained in its 1926 decision in *Village of Euclid v. Ambler Realty*, increasing population density had created new, novel problems “which require, and will continue to require, additional restrictions in respect of the use and occupation of private lands.”⁵⁵

Municipalities soon developed additional land use planning tools that did more than simply prohibit or limit land uses. A second generation of controls

⁵² *Mitigation*, BLACK’S LAW DICTIONARY (11th ed. 2019).

⁵³ See RESTATEMENT (FIRST) OF CONTRACTS § 336(1) (AM. LAW INST. 1932); see also Charles J. Goetz & Robert E. Scott, *The Mitigation Principle: Toward a General Theory of Contractual Obligation*, 69 VA. L. REV. 967, 967 (1983) (“The duty to mitigate is a universally accepted principle of contract law requiring that each party exert reasonable efforts to minimize losses whenever intervening events impede contractual objectives.”).

⁵⁴ See, e.g., Note, *The Mitigating Effect on Damages of Social Welfare Programs*, 63 HARV. L. REV. 330, 337 (1949) (“In general, however, it would seem reasonable that a compensatory theory of damages be adhered to as far as possible; this requires mitigation of the damages recoverable by the injured party from the wrongdoer.”).

⁵⁵ 272 U.S. 365, 386 (1926).

recognized that “many proposed land uses threaten to impose costs on the public that dedications of property can offset,”⁵⁶ and zoning boards and other land use agencies began to condition land use approvals upon a property owner agreeing to engage in activities to offset those costs.⁵⁷ These so-called exactions are equivalent to compensatory mitigation: they do not seek to modify a development proposal to avoid or minimize impacts, but rather, they require developers to compensate for impacts.

Exactions first appeared as rules governing subdivisions to secure infrastructure, such as adequate streets and sewers, to service the subdivided lots without taxpayers footing the bill.⁵⁸ Subdivision exactions were included in model zoning enabling legislation issued by the U.S. Department of Commerce in 1928.⁵⁹ By the mid-1960s, the use of exactions had broadened to address the pressure a subdivision places upon social services like education and open space.⁶⁰

The Supreme Court considered whether exactions violate private property rights in a series of cases that represent the Court’s closest brush with compensatory mitigation. In 1987 in *Nollan v. California Coastal Commission* and in 1994 in *Dolan v. City of Tigard*, the Court considered exactions that required property owners to convey interests in land to the government in exchange for development authorization.⁶¹ Read together, the Court approved such measures so long as there exists a “‘nexus’ and ‘rough proportionality’ between the gov-

⁵⁶ *Koontz v. St. Johns River Water Mgmt. Dist.*, 570 U.S. 595, 605 (2013).

⁵⁷ Exactions could be somewhat broader than compensatory mitigation because they could impose obligations disconnected from the harm threatened by the regulatory permission to which they attach. Such exactions would not mitigate harms. The Supreme Court has substantially limited, and perhaps altogether prohibited, that practice. *See Koontz*, 570 U.S. at 606.

⁵⁸ *See, e.g., Allen v. Stockwell*, 178 N.W. 27, 28, 29–30 (Mich. 1920) (reciting exaction provisions of subdivision ordinance and holding that requiring a property owner to install improvements was valid exercise of the police power). Although some infrastructure exactions required property owners to construct improvements on their own property, even in the early days they were not always geographically limited. *See, e.g., John W. Reps, Control of Land Subdivision by Municipal Planning Boards*, 40 CORNELL L.Q. 258, 267 (1955) (describing a 1937 New York law requiring that “before a building permit may be issued, the street or highway providing access to the building must ‘have been suitably improved . . . as adequate in respect to the public health, safety and general welfare for the special circumstances of the particular street or highway’” (quoting N.Y. TOWN LAW § 260-a)).

⁵⁹ *See U.S. DEP’T OF COMMERCE, A STANDARD CITY PLANNING ENABLING ACT 27 (1928)* (“Such [subdivision] regulations may include provisions as to the extent to which streets and other ways shall be graded and improved and to which water and sewer and other utility mains, piping, or other facilities shall be installed as a condition precedent to the approval of the [subdivision] plat.”).

⁶⁰ *See Ira Michael Heyman & Thomas K. Gilhool, The Constitutionality of Imposing Increased Community Costs on New Suburban Residents Through Subdivision Exactions*, 73 YALE L.J. 1119, 1134 (1964) (“Typical of the newer kinds of demanded exactions are land dedications for school and park sites and fees to be used for the acquisition and improvement of such sites.”).

⁶¹ *Dolan v. City of Tigard*, 512 U.S. 374 (1994); *Nollan v. Cal. Coastal Comm’n*, 483 U.S. 825 (1987).

ernment's demand and the effects of the proposed land use."⁶² In other words, the government can demand a dedication of property to mitigate the harms caused by a developer's activities, so long as the property actually served to offset attendant harms. In 2013, in *Koontz v. St. Johns River Management District*, the Court extended this framework to include exactions requiring payment of money to the government, rather than the conveyance of real property.⁶³ Where the government's demand for land or funds does not relate to the impacts threatened by proposed development, the Court explained that an exaction "is not a valid regulation of land use but 'an out-and-out plan of extortion.'"⁶⁴ Where, however, a sufficient connection exists, the Court has simply "insist[ed] that landowners internalize the negative externalities of their conduct," which is "a hallmark of responsible land-use policy."⁶⁵ Put differently, so long as exactions constitute compensatory mitigation, the Supreme Court has countenanced their use.

B. Developing Principles of Environmental Mitigation

Federal agencies lagged behind local land use planners in adopting mitigation policies but began to do so in the late 1970s. Environmental mitigation recognizes that humans do not act in isolation: our activities often have costs that we do not directly bear. A landowner who seeks a permit to fill wetlands on her property to create fast land upon which to build a mall may increase the risk of flooding elsewhere in the watershed.⁶⁶ A company that seeks authorization to drill an oil well in sage-grouse country can destroy native plant species providing forage for mule deer.⁶⁷ An energy company that plans to build hun-

⁶² *Koontz*, 570 U.S. at 599 (describing *Nollan* and *Dolan*); see Justin R. Pidot, *Fees, Expenditures, and the Takings Clause*, 41 *ECOLOGY L.Q.* 131, 142–47 (2014) (discussing the evolution of the exactions doctrine). The nexus and proportionality test applies only to land use exactions and not regulations that simply restrict property uses. See Timothy M. Mulvaney, *Non-Enforcement Takings*, 59 *B.C. L. REV.* 145, 153 (2018).

⁶³ *Koontz*, 570 U.S. at 612. It remains unsettled, however, whether every permit condition is subject to this limitation, such as permit conditions that require an owner to expend funds to satisfy an affirmative obligation, but do not involve a transfer of money or other property to the government. See Pidot, *supra* note 62, at 135–36. It is also unknown whether those imposed through legislation rather than through permitting are subject to this limitation. See John D. Echeverria, *The Costs of Koontz*, 39 *VT. L. REV.* 573, 610–12 (2015).

⁶⁴ *Nollan*, 483 U.S. at 837 (quoting *J.E.D. Assocs., Inc. v. Town of Atkinson*, 432 A.2d 12, 14–15 (N.H. 1981)). The Supreme Court's use of the word "extortion" in *Nollan* to describe exactions unconnected to the harms threatened by development may be the source that inspired Secretary Zinke's description of compensatory mitigation in the same terms. See Pidot, *supra* note 29, at 12–13.

⁶⁵ *Koontz*, 570 U.S. at 605.

⁶⁶ See *Bersani v. U.S. Envtl. Prot. Agency*, 850 F.2d 36, 38 (2d Cir. 1988) (upholding denial of wetlands fill permit to property owner intending to build a mall); Justin Pidot, *Deconstructing Disaster*, 2013 *BYU L. REV.* 213, 250 (discussing externalities from watershed development).

⁶⁷ *Theodore Roosevelt Conservation P'ship*, 661 F.3d at 75.

dreds of wind turbines along the Appalachian Trail can destroy the feeling of naturalness experienced by those who traverse its length.⁶⁸ If these activities occur, the harms to wildlife, watersheds, and naturalness will impair public values and will constitute economic externalities, because they are not borne by the hardware store owner, the oil driller, or the wind farmer.⁶⁹ Environmental mitigation offers a potential corrective, both to the economic inefficiency resulting from externalities and to environmental harm.

Unlike mitigation in other contexts, environmental mitigation has been defined to include activities broader than those solely designed to offset impacts. Federal agencies, including the Council of Environmental Quality and the U.S. Fish and Wildlife Service, define mitigation to encompass a spectrum of measures to avoid, minimize, and compensate for impacts—described as a mitigation hierarchy.⁷⁰ The hierarchy exists because mitigation policies generally direct that impacts should be avoided, then minimized, and those that remain should be compensated.⁷¹ Environmental mitigation, therefore, departs from the traditional usage of the term, that is confined to offsetting harm, rather than avoiding or minimizing it.

The broader meaning of mitigation in the environmental context and the mitigation hierarchy have begun to take root in other disciplines outside of the environmental context. The World Bank, for instance, uses the mitigation hierarchy to identify measures to address both the environmental and social impacts resulting from the projects it funds,⁷² and the mitigation hierarchy was included in a 2010 report designed to facilitate corporate social responsibility in the human rights context.⁷³

⁶⁸ See NEW ENGLAND CONSERVATION CMTY., PERSPECTIVES ON WIND POWER: DEFINING COMMON PRINCIPLES ON WIND POWER DEVELOPMENT AND THE PROTECTION OF NEW ENGLAND'S NATURAL HERITAGE 1 (Jan. 2006), <https://www.outdoors.org/wp-content/uploads/pdf/cons-wind-power-wpaper.pdf> [<https://perma.cc/RRW6-85VD>].

⁶⁹ See Jayni Foley Hein, *Federal Lands and Fossil Fuels: Maximizing Social Welfare in Federal Energy Leasing*, 42 HARV. ENVTL. L. REV. 1, 3–4 (2018) (explaining that environmental externalities “are not accounted for when leasing” fossil fuel resources on public lands, which “results in fossil fuel production on public lands imposing significant social costs”).

⁷⁰ 10 C.F.R. § 900.3 (2019) (identifying “mitigation hierarchy” as “first seeking to avoid, then minimize impacts, then, when necessary, compensate for residual impacts”); 40 C.F.R. § 1508.20 (2019) (defining “mitigation”). The Council of Environmental Quality’s regulations identify five (rather than three) components of mitigation: measures that avoid, minimize, rectify, reduce, and compensate for environmental impacts. 40 C.F.R. § 1508.20.

⁷¹ 10 C.F.R. § 900.3.

⁷² See WORLD BANK, ENVIRONMENTAL AND SOCIAL FRAMEWORK 26–27 (2017); see also Wells Fargo & Co., SEC No-Action Letter, 2017 WL 6616862, at *35 (Mar. 6, 2018) (establishing a performance standard to “avoid, minimize, and where residual impacts remain, to compensate/offset for risks and impacts to workers, Affected Communities, and the environment”).

⁷³ See DÉsirÉE ABRAHAMS & YANN WYSS, INT’L BUS. LEADERS FORUM & INT’L FIN. CORP., GUIDE TO HUMAN RIGHTS IMPACT ASSESSMENT AND MANAGEMENT (HRIAM) 49 (2010) (identify-

Two programs have taken a leading role in developing environmental mitigation—wetlands mitigation under the Clean Water Act and habitat mitigation under the Endangered Species Act.⁷⁴ The U.S. Army Corps of Engineers, in coordination with the Environmental Protection Agency, developed the wetlands mitigation program after President George H.W. Bush adopted a policy of no-net loss of wetlands.⁷⁵ The phrase “no-net loss” implies tradeoffs between wetlands across geography, and pursuing that goal would either require a freeze in the filling of wetlands or the development of a robust mechanism for compensatory mitigation.

The Corps has rarely exercised its authority to deny fill permits, and instead pursued wetlands mitigation aggressively.⁷⁶ For almost two decades, wetlands mitigation occurred through a “mish-mash of guidances, inter-agency memoranda, and other policy documents.”⁷⁷ In 2008, the Corps replaced that assemblage with comprehensive regulations. The regulations define compensatory mitigation to include efforts to restore, create, enhance, or even sometimes preserve aquatic resources to offset the impacts a permitted activity will have to biological, environmental, and hydrological systems.⁷⁸ They further provide that a permittee may mitigate by undertaking a project directly or by acquiring mitigation credits from for-profit and non-profit mitigation banks and other programs administered by government and non-profit entities.⁷⁹

The U.S. Fish and Wildlife Service adopted its first formal mitigation policy in 1981.⁸⁰ The program became a significant component of the Service’s work during the Clinton Administration, when under the leadership of Secre-

ing measures to avoid, reduce, restore, and compensate); *see also* Radu Mares, *Human Rights Due Diligence and the Root Causes of Harm in Business Operation: A Textual and Contextual Analysis of the Guiding Principles on Business and Human Rights*, 10 NE. U. L. REV. 1, 59–60 (2018) (discussing mitigation hierarchy and the HRIAM guide).

⁷⁴ Clean Water Act, 33 U.S.C. § 1251 (2018); Endangered Species Act, 16 U.S.C. § 1531 (2018).

⁷⁵ *See* Ruhl & Salzman, *supra* note 36, at 2–4.

⁷⁶ *See* James Salzman & J.B. Ruhl, *Currencies and the Commodification of Environmental Law*, 53 STAN. L. REV. 607, 650–57 (2000) (describing the development of wetlands mitigation banking).

⁷⁷ J.B. Ruhl et al., *Implementing the New Ecosystem Services Mandate of the Section 404 Compensatory Mitigation Program—A Catalyst for Advancing Science and Policy*, 38 STETSON L. REV. 251, 252 (2009).

⁷⁸ 33 C.F.R. § 322.2 (2019); 40 C.F.R. § 230.92 (2019); *see, e.g.*, S. PAC. DIV., U.S. ARMY CORPS OF ENG’RS, FINAL 2015 REGIONAL COMPENSATORY MITIGATION AND MONITORING GUIDELINES 14 (2015), <https://www.spd.usace.army.mil/Portals/13/docs/regulatory/mitigation/MitMon.pdf> [<https://perma.cc/HS6X-D955>] (“According to the Mitigation Rule . . . consideration of aquatic resource function and service objectives is important given that different landscape positions and landscape stressors influence fulfillment of various functions and of hydrology, water quality, and habitat functions in the context of compensatory mitigation.”).

⁷⁹ S. PAC. DIV., *supra* note 78, at 48. The regulations differentiate between acquiring credits from a mitigation bank and an in-lieu fee program, each of which is subject to different governing rules. *Id.*

⁸⁰ U.S. Fish and Wildlife Service Mitigation Policy; Notice of Final Policy, 46 Fed. Reg. 7644, 7648 (Dep’t of the Interior Jan. 23, 1981).

tary Bruce Babbitt, it sought to inject greater flexibility and predictability into the Endangered Species Act.⁸¹ Two initiatives resulted: (1) the development of Candidate Conservation Agreements, whereby property owners could agree to take conservation actions for an unlisted species to secure predictable obligations should the species be listed;⁸² (2) significant expansion of the use of habitat conservation plans to enable private parties to secure authorization for the incidental take of listed species.⁸³ Compensatory mitigation lay at the heart of both of these programs because they rested on the premise that impacts to species at one location could be offset elsewhere.⁸⁴

The boundaries for avoidance, minimization, and compensation are not, however, always as crisp, particularly in the context of public land management. Wetlands mitigation and habitat mitigation seek to protect a single resource. When an acre of wetlands is destroyed or degraded, activities taken elsewhere to offset the impact comfortably fit within the definition of compensatory mitigation. This analysis changes when multiple resources come into play. Imagine that an oil drilling operation will occur in an area rich with native plants that provides forage for mule deer. If the driller is required to cultivate new native plants to offset those destroyed by its operation, this might at first appear to constitute compensatory mitigation: a gain of native plants is compensating for a loss elsewhere. Public land management is not limited, however, to conserving plant species.⁸⁵ If the newly restored habitat provides forage for the very animals who grazed where the oil well now stands, this measure could also be described as minimizing impacts to the mule deer herd. Framing the nature of the threatened harm and the mechanism by which a measure ameliorates that harm can, therefore, lead to differing conclusions about whether a measure avoids, minimizes, or compensates for harm. This categorization problem need not impede management decisions, however, so long as public land managers have authority to require all forms of mitigation.

⁸¹ See Babbitt, *supra* note 22, at 366; J.B. Ruhl, *Past, Present, and Future Trends of the Endangered Species Act*, 25 PUB. LAND & RESOURCES L. REV. 15, 33–34 (2004).

⁸² Announcement for Final Policy for Candidate Conservation Agreements with Assurances, 64 Fed. Reg. 32,726, 32,726 (Dep't of the Interior June 17, 1999).

⁸³ Habitat Plan Assurances (“No Surprises”) Rule, 63 Fed. Reg. 8859, 8859 (Feb. 23, 1998) (to be codified at 50 C.F.R. pt. 222); see Alejandro E. Camacho, *Can Regulation Evolve? Lessons from a Study in Maladaptive Management*, 55 UCLA L. REV. 293, 308 (2007) (explaining that habitat conservation plans “flourished during the Clinton Administration and continue to proliferate”).

⁸⁴ See Salzman & Ruhl, *supra* note 76, at 648 (explaining that Service has “leveraged [HCPs] as a way of allowing development that degrades endangered species habitat by preserving or enhancing endangered species habitat elsewhere”).

⁸⁵ See 43 U.S.C. § 1702(c) (2018) (defining multiple-use management).

C. Changing Tides of Compensatory Mitigation on Public Lands

The BLM has relied upon compensatory mitigation as a component of public land management for many decades, but in an often atomistic and ad hoc fashion, dependent on the preferences of local land managers and their views of the particular land uses they authorize.⁸⁶ The agency incorporated compensatory mitigation into decisions authorizing projects at least sixteen times between 1980 and 2000 and dozens more between 2000 and 2008.⁸⁷ For many years, the practice received little attention—perhaps because these decisions addressed specific projects, rather than constituting national policy directives—although a state BLM office barred compensatory mitigation requirements for public lands in Wyoming for a few years in the 1990s.⁸⁸ The most recent presidential administrations set new courses, displacing local decisions with national directives. This Section describes efforts in the Obama Administration to standardize compensatory mitigation and incorporate it into land use planning, and in the Trump Administration to disavow the tool altogether.

When the Obama Administration took power, the BLM had issued only one nationwide policy that addressed compensatory mitigation in one context. In 2000, the BLM issued regulations to ensure that hard rock mining did not cause “undue or unnecessary degradation of the land” as required by FLPMA.⁸⁹ During the rulemaking process, some commenters argued that the BLM lacked authority to require miners to engage in compensatory mitigation. The BLM disagreed, explaining that “[m]itigation measures fall squarely within the actions the Secretary can direct to prevent undue or unnecessary degradation of the public lands. An impact that can be mitigated, but is not, is unnecessary.”⁹⁰ The rule requires compensatory mitigation where it could occur at a project site, and permitted, but does not require, off-site compensatory mitigation.⁹¹ Although not entirely precise, the BLM described on-site mitigation as involving measures occurring “on the public lands within the area of mining operations.”⁹² The BLM did not explain why mitigation would always be required if it could be performed “within the area,” but would be required on a case-by-

⁸⁶ See *supra* notes 16–18 and accompanying text.

⁸⁷ See Memorandum from Michael D. Nedd, Acting Director of the Bureau of Land Mgmt., Re: BLM Authorized Projects with Compensatory Mitigation, at Attachment 1 (Aug. 25, 2017) (on file with author). The BLM identifies 52 approvals that included compensatory mitigation between 2000 and 2008, most of which address impacts to wildlife habitat and cultural resources. *Id.*

⁸⁸ See Pidot, *supra* note 29, at 9.

⁸⁹ 43 U.S.C. § 1732(b).

⁹⁰ Mining Claims Under the General Mining Laws; Surface Management, 65 Fed. Reg. 69,998, 70,012 (Nov. 21, 2000) (to be codified at 43 C.F.R. pt. 2090, et al).

⁹¹ *Id.*

⁹² *Id.*

case basis if located further afield.⁹³ Nor did the regulations provide further definition of when, where, or how compensatory mitigation would be required, leaving such decisions to field managers tasked with reviewing and approving mining plans.

The Obama Administration effort to reform and standardize compensatory mitigation started at the top. In May 2013, President Barack Obama issued a memorandum addressing infrastructure projects including roads, transmission lines, navigation channels, pipelines, and renewable and conventional energy generation.⁹⁴ The Obama Infrastructure Memorandum explains that “[r]eliable, safe, and resilient infrastructure is the backbone of an economy built to last.”⁹⁵ These important public priorities are not, however, elevated above all others. Rather, echoing principles of multiple use management, the memorandum explains that “in taking steps to improve our infrastructure, we must remember that the protection and continued enjoyment of our Nation’s environmental, historic, and cultural resources remain an equally important driver of economic opportunity, resiliency and quality of life.”⁹⁶ The Memorandum then advocates for the use of an array of policies and practices to shape the balance struck among these competing demands for public lands, including “landscape- and watershed-level mitigation practices.”⁹⁷

In 2015, the President issued a second memorandum, this time specifically addressing mitigation practices across the federal government.⁹⁸ Once again, the memorandum invokes themes of balancing current development needs with conserving resources for future generations, proclaiming that “[w]e all have a moral obligation to the next generation to leave America’s natural resources in better condition than when we inherited them.”⁹⁹ Mitigation in general, and compensatory mitigation in particular, is identified as a vital tool to “achieve strong environmental outcomes while encouraging development and providing services to the American people.”¹⁰⁰ The Obama Mitigation Memorandum recognizes that compensatory mitigation may impose costs on business interests, but asserts that these costs could be minimized by ensuring that mitigation policies are clear and consistent across federal agencies. Consistency would increase business certainty, allowing resource users to better plan and obtain fi-

⁹³ *Id.*

⁹⁴ Memorandum on Modernizing Federal Infrastructure Review and Permitting Regulations, Policies, and Procedures, 78 Fed. Reg. 30,733, 30,733 (May 22, 2013).

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ Memorandum on Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment, 80 Fed. Reg. 68,743, 68,743 (Nov. 6, 2015).

⁹⁹ *Id.*

¹⁰⁰ *Id.*

nancing for their activities.¹⁰¹ It would also enhance fairness by creating a level playing field so that some businesses were not placed at a competitive disadvantage through the imposition of ad hoc requirements that could increase their costs as compared to other businesses that received more favorable terms.¹⁰²

Activity at the Department of the Interior reflected the White House's attention to compensatory mitigation. Secretary Sally Jewell convened a working group to review mitigation policies Department-wide and to recommend revisions to enhance consistency and focus mitigation on landscapes and ecosystems, rather than on individual project sites.¹⁰³ The taskforce issued a report articulating a set of general principles,¹⁰⁴ which were then embedded in a new section of the Departmental Manual—a document that establishes policies for all Interior components—that established a “Landscape-Scale Mitigation Policy.”¹⁰⁵ In turn, the BLM implemented that directive in a mitigation policy of its own.¹⁰⁶ At the BLM's request, the Department Solicitor also issued a legal opinion (M-37039) analyzing the authority FLPMA provides to require compensatory mitigation, which concludes that “the BLM generally has the authority and discretion to identify and require appropriate mitigation when authorizing uses of the public lands.”¹⁰⁷

In 2016, the BLM amended its land use planning regulations to include objectives to “[i]dentify standards to mitigate undesirable impacts to resource conditions,” including through compensatory mitigation.¹⁰⁸ It also incorporated compensatory mitigation requirements into specific land use plans and project level decisions in two high-visibility contexts: greater sage-grouse conservation and energy infrastructure development. Landscape-scale compensatory mitigation became the cornerstone of the BLM and the U.S. Forest Service greater sage-grouse conservation plans, which were subsequently implemented by amending more than ninety land use plans for public lands and national forests and which forestalled listing the species under the Endangered Species

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ Secretarial Order No. 3330, *supra* note 24.

¹⁰⁴ ENERGY & CLIMATE CHANGE TASK FORCE, A STRATEGY FOR IMPROVING THE MITIGATION POLICIES AND PRACTICES OF THE DEPARTMENT OF THE INTERIOR, at i (2014).

¹⁰⁵ U.S. DEP'T OF THE INTERIOR, LANDSCAPE-SCALE MITIGATION POLICY MANUAL (600 DM 6) 1 (2015).

¹⁰⁶ BUREAU OF LAND MGMT., U.S. DEP'T OF THE INTERIOR, MITIGATION HANDBOOK (H-1794-1) 1 (2016); BUREAU OF LAND MGMT., U.S. DEP'T OF THE INTERIOR, MITIGATION MANUAL (MS-1794) 1 (2016).

¹⁰⁷ Memorandum (M-37039) from Solicitor, Dep't of the Interior, to Sec'y et al., Dep't of the Interior 29 (Dec. 21, 2016).

¹⁰⁸ Resource Management Planning, 81 Fed. Reg. 89,580, 89,662–63 (Dec. 12, 2016) (to be codified at 43 C.F.R. pt. 1600).

Act.¹⁰⁹ Under the amended land use plans, resource users must implement compensatory mitigation as a condition of engaging in surface-disturbing activities within sixty seven million acres of federal lands.¹¹⁰ The adoption of this mechanism led states and non-profit organizations to develop mechanisms of their own through which resource users could satisfy federal mitigation obligations. For example, both Nevada and the Nature Conservancy developed protocols for the creation of tradeable mitigation credits.¹¹¹ Private companies, like Barrick Gold and Newmont Mining, entered into memorandums of understanding with the Interior Department to develop and implement their own innovative approaches to mitigation, agreeing to marshal their resources to conserve sagebrush to facilitate approval of their mining projects.¹¹²

The BLM also incorporated compensatory mitigation requirements in the DRECP. The plan governs permitting for extensive new alternative energy development in high-potential areas of the California desert, while accounting for environmental harms.¹¹³ It accomplishes that task, in part, by designating “development focus areas,” where the approval process for new alternative energy projects would be streamlined, and designating other “variance process lands” available for development contingent upon project proponents performing activities to compensate for environmental impacts.¹¹⁴ The DRECP also establishes caps on the amount of ground disturbance that could occur simultaneously and relies upon compensatory mitigation to offset disturbances in excess of that cap.¹¹⁵ The BLM hoped that establishing this general planning framework for the area would “increase compensatory mitigation effectiveness, durability, transparency, and consistency.”¹¹⁶

The BLM also relied upon compensatory mitigation requirements in approving several projects of national significance. For example, it included them in approving the Ivanpah Solar Facility, including for lost desert tortoise habitat.¹¹⁷ Similarly, BLM’s decision approving the TransWest Express Trans-

¹⁰⁹ See Greater Sage-Grouse Finding, *supra* note 26, at 59,858; Pidot, *supra* note 27, at 186.

¹¹⁰ See U.S. FOREST SERV., *supra* note 26, at 1.

¹¹¹ Pidot, *supra* note 27, at 191.

¹¹² *Id.* at 192–97.

¹¹³ DRECP ROD, *supra* note 25, at 6–7.

¹¹⁴ *Id.* at 39.

¹¹⁵ BUREAU OF LAND MGMT., DESERT RENEWABLE ENERGY CONSERVATION PLAN: LAND USE PLAN AMENDMENT, at xvi (2016), https://eplanning.blm.gov/epl-front-office/projects/lup/66459/133474/163144/DRECP_BLM_LUPA.pdf [<https://perma.cc/8B7A-3PJU>].

¹¹⁶ DRECP ROD, *supra* note 25, at 6–7.

¹¹⁷ BUREAU OF LAND MGMT., IVANPAH SOLAR ELECTRIC GENERATING SYSTEM PROJECT AND ASSOCIATED AMENDMENT TO THE CALIFORNIA DESERT CONSERVATION AREA PLAN RECORD OF DECISION 19 (2010), <https://eplanning.blm.gov/epl-front-office/projects/nepa/65894/79885/92641/FinalRODIvanpahSolarProject.pdf> [<https://perma.cc/P8EC-VABH>]. For the specific compensatory mitigation measures required, see the appendix to the record of decision. BUREAU OF LAND MGMT.,

mission Project required the project sponsor to offset impacts to wilderness values, to “calculate the final acreage of impacted lands with wilderness characteristics,” and to engage in “preservation and/or restoration actions to improve or protect the same amount of acres of wilderness characteristics.”¹¹⁸

The Trump Administration dramatically reversed course. President Donald Trump withdrew the Obama Mitigation Memorandum and initiated a policy of “energy dominance.”¹¹⁹ The President issued Executive Order 13,783, which directs all components of the executive branch to review all agency actions, practices, and policies and to identify those that “potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources.”¹²⁰ The burdens so identified are to be revised or rescinded.¹²¹

Policies at the Department of Interior swiftly changed too. At the behest of the Trump Administration, Congress exercised the Congressional Review Act to rescind the BLM’s new planning regulations.¹²² Soon after assuming office, Secretary Ryan Zinke withdrew the Landscape-Scale Mitigation Policy and in response to Executive Order 13,783, issued a Secretarial Order directing all components to review and identify policies that could burden energy development.¹²³ This resulted in a lengthy report listing regulations, policies, and practices that energy companies were required to follow, including compensatory mitigation.¹²⁴ Shortly thereafter, the BLM withdrew its own mitigation

IVANPAH SOLAR ELECTRIC GENERATING SYSTEM PROJECT AND ASSOCIATED AMENDMENT TO THE CALIFORNIA DESERT CONSERVATION AREA PLAN RECORD OF DECISION APPENDICES (2010), https://eplanning.blm.gov/epl-front-office/projects/nepa/65894/79900/92660/Ivanpah_ROD_appendices.pdf [<https://perma.cc/DT77-3JFDJ>].

¹¹⁸ BUREAU OF LAND MGMT., TRANSWEST EXPRESS TRANSMISSION PROJECT AND RESOURCE MANAGEMENT PLAN AMENDMENTS RECORD OF DECISION 2 (2016) [hereinafter TRANSWEST EXPRESS ROD], https://eplanning.blm.gov/epl-front-office/projects/nepa/65198/92849/113809/BLM_ROD_FINAL_20161212.pdf [<https://perma.cc/4YVD-VTN2>]; BUREAU OF LAND MGMT., TRANSWEST EXPRESS TRANSMISSION PROJECT AND RESOURCE MANAGEMENT PLAN AMENDMENTS RECORD OF DECISION APPENDIX F, at F-21 (2016) [hereinafter TRANSWEST EXPRESS APPENDIX], https://eplanning.blm.gov/epl-front-office/projects/nepa/65198/92793/111802/AppF_TWE_ReqdMitigation.pdf [<https://perma.cc/JSM7-QEWL>].

¹¹⁹ Exec. Order No. 13,783, 82 Fed. Reg. 16,093, 16,094 (Mar. 31, 2017); see Steven Mufson & Chris Mooney, *Trump’s Pitch for U.S. ‘Energy Dominance’ Is Dominated by Misleading Claims*, WASH. POST (June 29, 2017), <https://www.washingtonpost.com/news/energy-environment/wp/2017/06/29/the-white-house-labeled-this-energy-week-and-you-thought-it-was-all-healthcare> [<https://perma.cc/84A4-7TPD>].

¹²⁰ Exec. Order No. 13,783, 82 Fed. Reg. at 16,093.

¹²¹ *Id.*

¹²² See THOMAS O. MCGARITY ET AL., CTR. FOR PROGRESSIVE REFORM, THE CONGRESSIONAL REVIEW ACT: THE CASE FOR REPEAL 20 (2018), http://progressivereform.org/articles/CRA_Repeal_Case_050218.pdf [<https://perma.cc/NQ68-QC33>].

¹²³ Ryan Zinke, Sec’y, U.S. Dep’t of the Interior, Secretarial Order No. 3349 (Mar. 29, 2017).

¹²⁴ DOI ACTIONS, *supra* note 34, at 36.

policy and, in 2017, the Department's Acting Solicitor issued a new legal opinion (M-37046) to withdraw M-37039.¹²⁵ On July 24, 2018, the BLM issued a new instruction memorandum that directs public lands managers to no longer "require compensatory mitigation from public lands users," asserting that it lay beyond the BLM's statutory authority under FLPMA.¹²⁶ How this disclaimer of authority will affect earlier decisions—like the greater sage-grouse conservation plans, DRECP, and TransWest Express Transmission Line—remains to be seen, particularly because Western governors have expressed significant concern about abandoning compensatory mitigation for sagebrush.¹²⁷

The Trump Administration's new views of compensatory mitigation—as extortionate demands, or uncalled for burdens on industry—depart from the historic pattern of debates over the instrument and environmental law generally. Political conservatives have tended to advocate in favor of market mechanisms—like tradeable credit schemes—in place of more traditional, command and control techniques—like performance standards, technology requirements, use restrictions, or bans—favored by political liberals.¹²⁸ This divide reflects disagreements about how to understand environmental problems. Political conservatives have tended to view environmental problems as an economic issue in which externalities cause an inefficient under-production of public goods. Political liberals have been more inclined to view environmental problems as a moral issue in which ecological systems are fundamentally non-monetizable and unique, environmental and economic interests are different in kind, and the former should take precedence.¹²⁹ In that traditional discourse, compensatory mitigation naturally aligns with the conservative view because it is a quintessential example of trading: environmental harms at one location or time are offset by benefits at another. Compensatory mitigation stands in significantly greater tension with the liberal view because it presumes that the environment is inherently fungible. Compensatory mitigation has also often occurred

¹²⁵ Memorandum (M-37046) from Acting Solicitor, Dep't of the Interior, to Sec'y et al., Dep't of the Interior 2 (June 30, 2017); Memorandum (M-37039), *supra* note 107.

¹²⁶ July 2018 Instruction Memorandum, *supra* note 29.

¹²⁷ See Dan Elliot, *Western Governors, Including Utah's Gov. Gary Herbert, Say Ban on Land Deals Could Hurt Beleaguered Bird*, SALT LAKE TRIB. (Aug. 13, 2018), <https://www.sltrib.com/news/environment/2018/08/13/western-governors/> [<https://perma.cc/JG7V-95T9>].

¹²⁸ See Revesz, *supra* note 33, at 817–18 (explaining that the Trump Administration has "mounted an attack" on the cost-benefit analysis of environmental regulation, including a cap on regulatory costs that seems to ignore the net benefits of regulation).

¹²⁹ These disagreements have often been fiercely fought. Speaker of the House Newt Gingrich's Contract with America included aggressive legislative proposals to inject strict economic principles, like cost-benefit analysis and comparative risk assessment, into environmental law. See Robert L. Glicksman & Stephen B. Chapman, *Regulatory Reform and (Breach of) the Contract with America: Improving Environmental Policy or Destroying Environmental Protection?*, 5 KAN. J.L. & PUB. POL'Y 9, 17 (1996).

through market-based mechanisms that require affixing prices to environmental features like ecosystems and the environment, which some view as immoral or impossible.¹³⁰ As a result, criticism of compensatory mitigation came largely from environmentalists, who viewed it as a poor substitute for prohibiting harmful activities outright, particularly because evidence suggests that constructed or restored ecosystems can be a sorry substitute for those that are destroyed or degraded.¹³¹

Today, political liberals increasingly cast their arguments in economic terms, advocating for the consideration of ecosystem services—the economic value produced by healthy ecosystems—and co-benefits as a component of decision making.¹³² Political conservatives, on the other hand, have replaced a fundamentally economic approach to environmentalism with a rights-based vision of their own, grounded in the view that environmental regulation (and regulation more generally) fundamentally impinges on economic actors' liberty interests. Equating compensatory mitigation with blackmail makes sense only if people required to offset the harms of their actions have a right, either legal or moral, to engage in such actions unencumbered. At the core, then, rejection of compensatory mitigation amounts to an assertion that economic actors have a fundamental right to degrade public goods—like the ecological health of public lands. If the public wants to secure such goods for itself, the logic goes, the public should pay for them.

¹³⁰ Compensatory mitigation need not involve environmental markets that monetize the environment, but rather markets that can rely on other techniques to calculate debits and credits.

¹³¹ See, e.g., NAT'L RESEARCH COUNCIL, *supra* note 20, at 35–45 (outlining the various methods used to restore ecosystems and explaining that some ecosystems can be “difficult or impossible to restore”); David Moreno-Mateos et al., *Structural and Functional Loss in Restored Wetland Ecosystems*, 10 PLOS BIOLOGY 1, 1 (2012).

¹³² See, e.g., Kimberly M. Castle & Richard L. Revesz, *Environmental Standards, Thresholds, and the Next Battleground of Climate Change Regulations*, 103 MINN. L. REV. 1349, 1359 (2019) (discussing co-benefits produced by reducing greenhouse gas emissions as an important component of cost-benefit analysis); Kalyani Robbins, *Complementary Authority and the One-Way Ratchet: Ecosystem Services Property, Regulation, and Wildlife Conservation*, 48 ENVTL. L. 291, 292 (2018) (demonstrating how a “theory of ecosystem services property . . . can serve to complement regulatory efforts to protect biodiversity”); Irma S. Russell, *The Green Economy: Strategic Planning for a Future?*, 86 UMKC L. REV. 913, 925 (2018) (“Payment for Ecosystem Services (PES) as a concept has gained practical force from partnerships between not-for-profit groups, environmental scholars, and organizations such as the World Bank Group.”). Pursuing this progressive vision, the Obama Administration issued a memorandum in 2015 directing agencies to incorporate assessment of ecosystem services into their decisions. Memorandum from Shaun Donovan, Office of Mgmt. & Budget et al., to Exec. Dep’ts & Agencies (Oct. 7, 2015), <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2016/m-16-01.pdf> [https://perma.cc/TZM2-YCBG].

II. DEVELOPMENT OF PUBLIC LAND LAW

Assessing the wisdom and legality of compensatory mitigation requires a broader view of FLPMA's place within the history and architecture of public land law. Defining public lands and the law that governs them is a thorny and indeterminate task because, as Professor John Leshy recently observed, "there is no universally accepted meaning of the term."¹³³ Although this Article focuses on the public lands as defined by FLPMA—i.e., federally owned lands managed by the BLM¹³⁴—this Part takes a broader view and discusses federally owned property generally, addressing the body of laws, regulations, land use plans, and other enforceable rules applicable to that property.¹³⁵ This usage recognizes that two centuries of public land law predated FLPMA, and the term "public lands" continues to be used to broadly encompass federal property including National Parks, National Wildlife Refuges, National Forests, and National Monuments, and unreserved and undesignated federal land that remain in the public domain.¹³⁶ After describing the history of public land law, this Part then addresses components of FLPMA that bear on the BLM's authority to require compensatory mitigation.¹³⁷

A. Shifting Paradigms for Public Lands

The history of public land law lies at the epicenter of social transformation, philosophical evolution, shifting roles and capacities of the federal government, and increasingly sophisticated scientific understanding of natural

¹³³ See John D. Leshy, *Are U.S. Public Lands Unconstitutional?*, 69 HASTINGS L.J. 499, 503 (2018) ("[T]here is no universally accepted meaning of the term 'public lands' in U.S. law.").

¹³⁴ 43 U.S.C. § 1702(e) (2018) (defining "public lands" as "any land and interest in land owned by the United States within the several States and administered by the Secretary of the Interior through the Bureau of Land Management"). Contemporary controversies over "public lands" often refer to the corpus of federal property broader than that managed by the BLM. For example, a legal analysis prepared for the state of Utah—arguing that the United States must transfer public lands to the state—uses the phrase to mean all federally owned property, and in his comprehensive refutation of that analysis, Professor John Leshy follows suit. See Leshy, *supra* note 133, at 503; JOHN W. HOWARD ET AL., LEGAL ANALYSIS OF THE LEGAL CONSULTING SERVICES TEAM PREPARED FOR THE UTAH COMMISSION FOR THE STEWARDSHIP OF PUBLIC LANDS 110 (2015), <https://www.congress.gov/116/meeting/house/110088/documents/HHRG-116-II13-20191017-SD046.pdf> [<https://perma.cc/G546-M4GH>].

¹³⁵ See *infra* notes 138–194 and accompanying text.

¹³⁶ Public lands do not include property owned by the United States in trust for federally recognized tribes and public land law does not refer to the body of law governing those lands. See 43 U.S.C. § 1702(e)(2) (excluding from definition of "public lands" those "lands held for the benefit of Indians, Aleuts, and Eskimos").

¹³⁷ See *infra* notes 195–222 and accompanying text.

processes.¹³⁸ FLPMA is an example of the latest phase of public land law, which emphasizes diverse public interests in public lands over the long term. Understanding the paradigms of the laws that governed public lands before FLPMA provides context for assessing the intended sweep of the statute.

The Property Clause of Article IV of the Constitution undergirds the federal government's control of its property, vesting in Congress the "power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States."¹³⁹ Under the Property Clause, "Congress exercises the powers both of a proprietor and of a legislature over the public domain."¹⁴⁰

At a gross level, a standard account of America's approach to public lands identifies an era of disposition that transitioned to an era of retention and management.¹⁴¹ Disposal, in this contemporary narrative, refers to policies divesting the federal government of ownership in favor of privatization or ownership by states.¹⁴² This account doesn't perfectly capture the sporadic and inconsistent nature of the law's evolution: Congress first experimented with small-scale efforts to manage, rather than privatize, public lands in the nineteenth century, creating a leasing regime for lands containing lead resources and requiring royalty payments from leaseholders in the form of a proportion of the lead produced.¹⁴³ The Mining Law of 1872, a privatization law, continues to

¹³⁸ See generally Leigh Raymond & Sally K. Fairfax, *Fragmentation of Public Domain Law and Policy: An Alternative to the "Shift-to-Retention" Thesis*, 39 NAT. RESOURCES J. 649 (1999) (identifying the confluence of forces that affected development of public land law during the late nineteenth and early twentieth centuries). The transition from an intrinsic or natural law view of property based in the philosophy of John Locke's more communal and instrumentalist view substantially influenced the evolution of public land law. See Eric T. Freyfogle, *Private Property: The Story Retold*, 2004 U. ILL. L. REV. 445, 447-48 (discussing communal view of property); Raymond & Fairfax, *supra*, at 682-83.

¹³⁹ U.S. CONST. art. IV, § 3.

¹⁴⁰ *Kleppe v. New Mexico*, 426 U.S. 529, 540 (1976).

¹⁴¹ See Raymond & Fairfax, *supra* note 138, at 650 ("The received wisdom tells us that near the close of the nineteenth century, after more than one hundred years of granting and selling land to raise money and to encourage orderly settlement of the western territories, the federal government reconsidered."). Federal policy has also evolved with respect to the acquisition of federal lands, either through international agreements like the Louisiana Purchase or, more recently, through purchase under the Weeks Act of 1911. See Pub. L. No. 61-435, 36 Stat. 961 (codified as amended in scattered sections of 16 U.S.C.); Leshy, *supra* note 133, at 517 (discussing federal acquisition of territory before 1853). Policies related to acquisition of public lands are distinct, however, from how the federal government should approach them.

¹⁴² Professor Leshy makes a compelling case that disposal did not necessarily mean divestment at the time of America's founding. See Leshy, *supra* note 133, at 504-05. Instead, it meant contrasting federal disposal laws and retention laws is common place. See, e.g., 43 U.S.C. § 1701(a) (establishing policy that public lands "be retained in Federal ownership, unless as a result of the land use planning procedure . . . it is determined that disposal of a particular parcel will serve the national interest").

¹⁴³ See *United States v. Gratiot*, 39 U.S. (14 Pet.) 526, 537-38 (1840) (holding that the Property Clause vested Congress with authority to create the lead-leasing system); PAUL W. GATES, HISTORY

allow individuals locating hard rock minerals to acquire public resources at their own initiation, and until recently acquire fee title to the land when they did.¹⁴⁴

Crisply differentiating between a disposal era and a management era not only elides this inconsistent history, but masks important similarities stretching across time. One of the principles of public land law established early in the Republic that persists today is that Congress adopts general rules governing the public domain, while removing some lands in part or in whole from the application of those general rules.¹⁴⁵ Exempting certain lands from the rules applicable to the public domain occurs through mechanisms commonly termed reservations or withdrawals, which have related but distinct meanings.¹⁴⁶ Although the terms are sometimes used interchangeably, where they are differentiated, a withdrawal describes the act of exempting public lands from laws enabling private individuals to acquire interests in them, while a reservation describes the act of creating a similar exemption coupled with establishing a dominant or exclusive use for the designated lands.¹⁴⁷ Withdrawals and reservations have become an increasingly important component of public land law,¹⁴⁸ but even in the earliest days Congress and the Executive Branch recognized that some land should be retained in federal ownership for designated public purposes.¹⁴⁹ Military bases and lighthouses are prominent examples.¹⁵⁰

OF PUBLIC LAND LAW DEVELOPMENT 702 (1968) (describing leasing programs for lead mines between 1807 and 1846, including a regime in the mid-1820's involving "specific regulations governing mining").

¹⁴⁴ Ch. 152, § 1, 17 Stat. 91 (codified as amended at 30 U.S.C. § 22 (2018)). In 1994, Congress began the practice of imposing a moratorium on processing new patent applications through appropriations bills. See Sam Kalen, *An 1872 Mining Law for the New Millennium*, 71 U. COLO. L. REV. 343, 346 (2000).

¹⁴⁵ See, e.g., *United States v. Grimaud*, 220 U.S. 506, 522 (1911) (addressing the Secretary of Agriculture's authority to regulate the use of "lands . . . set apart as a forest reserve").

¹⁴⁶ See Marla E. Mansfield, *A Primer on Public Land Law*, 68 WASH. L. REV. 801, 821 (1993) (explaining that withdrawals and reservations "historically had different meanings").

¹⁴⁷ See *S. Utah Wilderness All. v. Bureau of Land Mgmt.*, 425 F.3d 735, 784 (10th Cir. 2005) ("A withdrawal makes land unavailable for certain kinds of private appropriation under the public land laws. . . . A reservation, on the other hand, goes a step further: it not only withdraws the land from the operation of the public land laws, but also dedicates the land to a particular public use."). Despite this clean conceptual distinction, the terms are sometimes used interchangeably. Reservations and withdrawals are similar, but somewhat distinct, mechanisms to protect public lands by removing them from the public domain, and the terms are sometimes used interchangeably. For example, in 1940 the Supreme Court described national forest lands as "withdrawn as a 'Government reservation.'" *United States v. N. Pac. Ry. Co.*, 311 U.S. 317, 354 (1940).

¹⁴⁸ See Robert B. Keiter, *Public Lands and Law Reform: Putting Theory, Policy, and Practice in Perspective*, 2005 UTAH L. REV. 1127, 1168–69 (discussing an increasing preservation approach to public lands).

¹⁴⁹ See Leshy, *supra* note 133, at 518 ("Early on . . . tracts of public lands containing salt deposits, minerals, hot springs, and forests valuable for naval ships and other uses were excluded from divestiture programs, and retained in U.S. ownership."). Congress sometimes provided broad authorization

These lands were reserved for long-term management for their designated purposes and made unavailable for disposal, albeit they were relatively small areas.¹⁵¹ Today, withdrawals and reservations designate public lands for an array of uses, including as National Parks, National Monuments, and National Forests.¹⁵²

The standard (a)historical account also leaves out important finer-grained distinctions among land disposal statutes and among management statutes. Rather than tracing temporal eras in public land law, four dominant conceptual paradigms emerge throughout its history that strike different balances between the public and private interests adhering to public lands: disposition to generate revenue, disposition to promote preferred uses, retention and management to promote preferred uses, and retention and management to promote and resolve conflicts among a multiplicity of uses. The first two paradigms prioritized private property and the rights of private individuals, resulting in the federal government transferring more than a billion acres of public lands to individuals, corporations, and states, leaving about 420 million acres in federal ownership.¹⁵³ As Congress enacted laws characterized by these successive paradigms, it increasingly elevated long-term societal values over private profit in the lands remaining in federal ownership. Within this framework, FLPMA represents the culmination of Congress's embrace of a paradigm in which the federal government manages public lands over the long term for the benefit of all Americans across all generations.¹⁵⁴

The disposition for revenue paradigm dominated the Nation's early decades. The federal government needed money, and public lands and the natural resources they held were valuable assets, although for a variety of reasons, the sale of public lands never generated substantial revenue.¹⁵⁵ Congress directed the Executive Branch to survey public lands into townships and sections and

for such reservations, such as an 1807 law that authorized the President to reserve lands "for public uses" in certain areas in the Michigan territory. An Act Regulating the Grants of Land in the Territory of Michigan, ch. 34, § 2, 2 Stat. 438 (1807).

¹⁵⁰ See Disposition of Abandoned Lighthouse Sites, 32 Op. Att'y Gen. 488 (1921) (designating lighthouses for federal ownership); Rock Island Military Reservation, 10 Op. Att'y Gen. 359 (1862) (naming military forts for same reason).

¹⁵¹ See *Wilcox v. Jackson*, 38 U.S. (13 Pet.) 498, 512 (1839) (upholding an executive action reserving area for military site and trading post). The reservation at issue in *Wilcox* comprised a little less than sixty acres. *Id.* at 502.

¹⁵² See Mansfield, *supra* note 146, at 842–52 (discussing national parks, wilderness areas, and wildlife refuges); Mark Squillace, *The Monumental Legacy of the Antiquities Act of 1906*, 37 GA. L. REV. 473, 476–86 (2003) (discussing history of national monuments established under the Antiquities Act).

¹⁵³ See PUBLIC LAND STATISTICS, *supra* note 6, at 5 (identifying the disposition of almost 1.3 billion acres between 1781 and 2017); Comment, *Management of Public Land Resources*, *supra* note 6, at 458.

¹⁵⁴ See 43 U.S.C. § 1702(c).

¹⁵⁵ See Leshy, *supra* note 133, at 518.

sell them at public auction.¹⁵⁶ Lands containing valuable resources, such as coal lands, could be purchased at a higher price.¹⁵⁷ Some lands—originally one section per township—were reserved from general sale to produce revenue for public education.¹⁵⁸ Although laws contemplating outright sale of public lands as a means to generate revenue dwindled in the latter half of the nineteenth century, they did not entirely disappear.¹⁵⁹ The Surplus Reclamation Lands Disposal Law of 1920, which remained in effect until 1976, authorized auction of public lands that had been reserved for irrigation works but later deemed unnecessary,¹⁶⁰ and FLPMA itself continues to allow sales in limited circumstances.¹⁶¹

The sale paradigm gradually gave way as Congress enacted new statutes authorizing private parties to claim public lands for specific, preferred uses, sometimes for free and at others for a nominal fee.¹⁶² In 1862, Congress enacted three laws that exemplify this paradigm. First, the Homestead Act promoted agriculture and settlement in the western United States by authorizing individuals to acquire up to 160 acres of surveyed public lands “for the purpose of actual settlement and cultivation.”¹⁶³ Second, the Morrill Act promoted public education by transferring public lands to state governments to establish land grant colleges emphasizing education related to “agriculture and the mechanic arts.”¹⁶⁴ Finally, the Pacific Railway Act promoted construction of railways from Lake Superior to Puget Sound by granting both lands to serve as the route

¹⁵⁶ See Sean M. Kammer, *Railroad Land Grants in an Incongruous Legal System: Corporate Subsidies, Bureaucratic Governance, and Legal Conflict in the United States, 1850–1903*, 35 LAW & HIST. REV. 391, 400 (2017) (“For several decades [following the founding of the United States] . . . [p]olicy makers believed that the public domain was one of the government’s most valuable assets and that the government should use it for raising revenues while also allowing for the orderly expansion of the body politic.”).

¹⁵⁷ See ch. 205, § 1, 13 Stat. 343 (1864) (authorizing sale of coal lands at public auction for a minimum of \$20 an acre); GATES, *supra* note 143, at 724.

¹⁵⁸ See GATES, *supra* note 143, at 724; see also THE STATE TRUST LANDS, <http://www.ti.org/statetrusts.html> [<https://perma.cc/3B3V-M2DL>] (identifying lands transferred to states).

¹⁵⁹ See ch. 561, § 9, 26 Stat. 1099 (1891).

¹⁶⁰ See ch. 192, § 1, 41 Stat. 605 (repealed 1976).

¹⁶¹ 43 U.S.C. § 1713 (2018).

¹⁶² ONE THIRD OF THE NATION’S LAND, *supra* note 1, at ix.

¹⁶³ Pub. L. No. 37-64, 12 Stat. 392 (1862) (repealed 1976); see Kammer, *supra* note 156, at 401 (explaining the Homestead Act); Darwin P. Roberts, *The Legal History of Federally Granted Railroad Rights-of-Way and the Myth of Congress’s “1871 Shift,”* 82 U. COLO. L. REV. 85, 126–27 (2011) (“The Homestead Act of 1862 . . . permitted settlers to acquire a farm out of the public domain, free of charge . . .”). While the 1862 laws constituted a dramatic shift toward disposition for specific uses, some earlier laws had a similar tenor. For example, the Preemption Act of 1830 enabled squatters on public lands to purchase the land they occupied if they attested to their intent to improve it. See GATES, *supra* note 143, at 224–25 (describing the Preemption Act of 1830); Kammer, *supra* note 156, at 400 (same).

¹⁶⁴ Pub. L. No. 37-108, 12 Stat. 503 (1862).

for the railway line and additional lands to subsidize construction costs.¹⁶⁵ These laws coexisted with others that transferred public lands to state governments in varying degrees at statehood.¹⁶⁶

In the decades that followed, Congress enacted more laws to promote favored uses through privatization. For example, the Mining Law of 1872 (which remains in effect) promoted mining of hard rock minerals by allowing prospectors to stake claims to mineral resources on public lands and eventually acquire fee title.¹⁶⁷ Congress later extended similar rights to individuals claiming lands containing building stone and petroleum.¹⁶⁸ The Timber Culture Act of 1873 promoted the planting and cultivation of trees, based in part on the antiquated view that trees could increase rainfall, by granting settlers an additional 160 acres of public lands if they committed to planting and cultivating forty acres of trees.¹⁶⁹ The Timber and Stone Act of 1878 enabled individuals to acquire 160 acres of public lands unfit for cultivation to extract timber and stone, important materials needed for settlement.¹⁷⁰ The Desert Lands Act of 1877 encouraged irrigation of arid lands by allowing individuals to acquire 640 acres of public lands so long as they constructed irrigation improvements within three years.¹⁷¹ Among the final law of this type was the Stock-Raising Homestead Act of 1916, which promoted animal agriculture by allowing individuals to acquire 640 acres of public lands for grazing purposes.¹⁷²

These laws resulted in large-scale privatization of public lands. As this occurred, Congress and the President increasingly recognized a public interest in retaining and managing public lands with certain characteristics for the

¹⁶⁵ Ch. 217, 13 Stat. 365 (1864); see Kammer, *supra* note 156, at 401 (discussing railway acts).

¹⁶⁶ In 1796, Tennessee became the first new state within which the federal government owned land, and the federal government initially retained ownership and the power of disposition over lands in the western region of the state, with the remainder turned over to the state government. In 1846, Congress changed course and transferred the remainder of the federal land to the state. See GATES, *supra* note 143, at 287–88. By contrast, when Nevada, Colorado, and Nebraska were admitted, Congress granted them two sections per township to support schools and a small amount of territory for other specified purposes. See *id.*

¹⁶⁷ § 1, 17 Stat. at 91; see Kalen, *supra* note 144, at 343–44 (“The 1872 Mining Law stands alone in the field of public land laws as the last vestige of a nineteenth century congressional public land policy designed to settle and promote development in a now-populous west.”).

¹⁶⁸ 61 Stat. 526 (1897); ch. 375, § 1, 27 Stat. 348 (1892).

¹⁶⁹ Ch. 277, 17 Stat. 605 (1873) (repealed 1891); see GATES, *supra* note 143, at 400.

¹⁷⁰ Ch. 151, 20 Stat. 89 (1878) (repealed 1955); see U.S. PUBLIC LANDS COMM’N, USE AND ABUSE OF AMERICA’S NATURAL RESOURCES, S. DOC. NO. 189, at v (3d Sess. 1905) (“The law was enacted to meet the demands of settlers, miners, and others for timber and stone for building, mining, and other purposes.”); Michael C. Blumm & Kara Tebeau, *Antimonopoly in American Public Land Law*, 28 GEO. ENVTL. L. REV. 155, 178 (2016) (describing the Timber and Stone Act).

¹⁷¹ Ch. 107, 19 Stat. 377 (1877) (codified as amended in scattered sections of 43 U.S.C.); see GATES, *supra* note 143, at 638–43.

¹⁷² Ch. 9, 39 Stat. 862 (1916) (codified as amended at 43 U.S.C. §§ 299, 301 (2018)).

long-term promotion of socially beneficial uses. Beginning in 1872, Congress began reserving public lands as national parks,¹⁷³ and it established the National Park Service in 1916, the same year it enacted the Stock Raising Homestead Act.¹⁷⁴ In 1964, Congress enacted the Wilderness Act to reserve designated wildlands for preservation.¹⁷⁵ Congress also enacted legislation empowering the President or Secretary of the Interior to withdraw or reserve public lands with other characteristics, including those containing forests,¹⁷⁶ historical and scientific resources,¹⁷⁷ and sites useful for the development of water-power and irrigation projects.¹⁷⁸

The Executive Branch also asserted power to withdraw lands without express delegation of authority from Congress, a practice that the Supreme Court endorsed in its 1915 decision *United States v. Midwest Oil Co.*¹⁷⁹ There, the Court held that Congress had acquiesced to this assertion of executive power by failing to intervene notwithstanding the effectuation of nearly one hundred withdrawals between 1870 and 1902 that had been reported to Congress.¹⁸⁰ In the early twentieth century, President Theodore Roosevelt exercised this non-statutory authority to direct the Secretary of the Interior to withdraw sixty-six million acres of coal lands.¹⁸¹ President Howard Taft followed suit and withdrew all federally owned petroleum resources.¹⁸²

The withdrawal of resources like forests, coal, and petroleum required new rules to manage public lands. Congress authorized regulation of forests on public lands in 1891, including identification of “tracts of land where timber may be cut,”¹⁸³ and created a system of national forests to conserve timber resources.¹⁸⁴ The Mineral Leasing Act of 1920 directed the creation of a leasing system for

¹⁷³ Yellowstone Act, ch. 24, 17 Stat. 32 (1872).

¹⁷⁴ National Park Service Organic Act, ch. 408, 39 Stat. 535 (1916) (codified as amended at 16 U.S.C. § 430(hh) (2018)).

¹⁷⁵ Wilderness Act of 1964, Pub. L. No. 88-577, 78 Stat. 890 (1964) (codified as amended at 16 U.S.C. § 1131 (2018)).

¹⁷⁶ See Forest Service Organic Act, ch. 2, 30 Stat. 34 (1897); General Revision Act, 26 Stat. 1103 (1891).

¹⁷⁷ Antiquities Act, 34 Stat. 225 (1906) (codified as amended at 54 U.S.C. §§ 320,301–320,303 (2018)).

¹⁷⁸ Pickett Act, ch. 421, § 2, 36 Stat. 487 (1910) (codified as amended at 43 U.S.C. § 142 (2018)).

¹⁷⁹ 236 U.S. 459 (1915).

¹⁸⁰ *Id.* at 480–81.

¹⁸¹ See GATES, *supra* note 143, at 726.

¹⁸² See *id.* at 732–33. The Pickett Act legislatively validated the coal and petroleum withdrawals. See *id.* at 735–36.

¹⁸³ Ch. 560, 26 Stat. 1094 (1891). This function resided in the Department of the Interior until 1905, when Congress transferred the management of national forests to the Department of Agriculture. Transfer Act of 1905, ch. 288, Pub. L. No. 58-34, 33 Stat. 628.

¹⁸⁴ See Forest Service Organic Act, ch. 2, 30 Stat. 34 (1897).

fossil fuels and chemicals used in fertilizer.¹⁸⁵ And the Taylor Grazing Act of 1934 repealed the Stock Raising Homestead Act to replace the system of privatizing range resources with a permit system to govern their management.¹⁸⁶

Conflicts among potential uses for public lands always existed; for example, the Preemption Laws of the early Republic resolved the potential conflict between the auction of lands and squatters who had improved them without first acquiring title.¹⁸⁷ Resolving these conflicts consisted of simply determining who among competing claimants should acquire title. Managing public lands on an ongoing basis, rather than privatizing them, presented new challenges that could only be resolved by accounting for different, conflicting uses.¹⁸⁸ Over time, Congress arrived at a new model for addressing conflicts, directing that public lands be managed for multiple uses, rather than a single, favored use. The Multiple Mineral Development Act of 1954 is an early example aiming to reconcile conflicts between two distinct uses, leased minerals and locatable minerals.¹⁸⁹ Congress took a much broader approach when it enacted the Multiple Use and Sustained Yields Act of 1960, which broadened U.S. Forest Service management of national forests to account for all competing uses, with a directive to ensure long-term sustainability.¹⁹⁰ Congress extended those multiple use principles to the public domain on a temporary basis through the Classification and Multiple Use Act of 1964,¹⁹¹ and convened a Public Land Law Review Commission to broadly review public land law.¹⁹² Congress directed the Commission to recommend legislation to further a policy that public lands “shall be (a) retained and managed or (b) disposed of, all in a manner to provide the maximum benefit for the general public” and directed the

¹⁸⁵ Pub. L. No. 66-146, 41 Stat. 437 (codified as amended at 30 U.S.C. § 181 (2018)); see GATES, *supra* note 143, at 740–41 (describing other leasing laws of similar vintage).

¹⁸⁶ Taylor Grazing Act, Pub. L. No. 73-482, 48 Stat. 1269 (1934); see GATES, *supra* note 143, at 516–17.

¹⁸⁷ See Leshy, *supra* note 133, at 519–20.

¹⁸⁸ See ONE THIRD OF THE NATION’S LAND, *supra* note 1, at ix (identifying an “inability of Congress and the administrators of public lands to resolve all the conflicting demands being made on the lands”). Professor Robert Keiter describes Congress’s adoption of multiple use management for the public domain and national forests, alongside reservation of increasing public land for conservation purposes, as constituting a “nature conservation period” that succeeded a “period of retention and management.” Keiter, *supra* note 148, at 1129–31. This delineation has power, particularly in view of the various conservation designations Congress has adopted. With respect to undesignated public lands, however, multiple use management comprises a recognition that conservation values should be placed alongside, but not above, other uses.

¹⁸⁹ Ch. 730, Pub. L. No. 83-585, 68 Stat. 708 (1954).

¹⁹⁰ Pub. L. No. 86-517, 74 Stat. 215 (codified as amended at 16 U.S.C. § 528 (2018)).

¹⁹¹ Pub. L. No. 88-607, 78 Stat. 986.

¹⁹² Public Land Law Review Commission Establishment Act, Pub. L. No. 88-606, § 3, 78 Stat. 982 (1964).

Commission to recommend legislation to further that policy.¹⁹³ Based upon those recommendations, Congress enacted FLPMA, rejecting privatization wholesale, in favor of the multiple use framework that continues today.¹⁹⁴

B. Managing Under the Federal Land Policy and Management Act

In 1970, the Public Land Law Review Commission issued a report urging Congress to adopt legislation to fully embrace the management paradigm for public lands.¹⁹⁵ Over the next six years, Congress debated legislation to implement the Commission's recommendations.¹⁹⁶ These deliberations came to fruition on October 21, 1976, when Congress enacted FLPMA to establish an overarching framework for the Department's management of public lands, and it remains bedrock today, establishing the principles under and processes for the BLM to manage the vast and diverse public lands.¹⁹⁷

FLPMA constituted a sea-change in public land law. As one Senate Report for the legislation explained: "While the Nation has come to regard the national resource lands as a permanent national asset which, for the most part, should be retained and managed on a multiple use, sustained yield basis, the only management tools available for this purpose remain some 3,000 public land laws which have accumulated over the last 170 years."¹⁹⁸ In place of the "often conflicting, on occasion truly contradictory, and to a serious extent, incomplete and inadequate" body of public land laws,¹⁹⁹ FLPMA provided comprehensive authority to manage public lands. The Act includes an array of provisions, some broad in application and some narrow, not all of which are catalogued here. Instead, this Section focuses on FLPMA's basic framework as relevant to compensatory mitigation requirements. It describes provisions that charge the BLM with engaging in land use planning—the Land Use Planning

¹⁹³ *Id.* §§ 2, 4.

¹⁹⁴ 43 U.S.C. § 1702(c).

¹⁹⁵ See ONE THIRD OF THE NATION'S LAND, *supra* note 1; Keiter, *supra* note 148, at 1129–31.

¹⁹⁶ See John A. Carver, Jr., *Federal Land Policy and Management Act of 1976: Fruition or Frustration*, 54 DENV. L.J. 387, 398–99 (1977) (describing efforts to implement Public Land Commission recommendations before FLPMA). See generally Schwartz, *supra* note 10 (detailing legislation introduced prior to FLPMA).

¹⁹⁷ 43 U.S.C. § 1701. Established in 1946 to consolidate the functions of the General Land Office and Grazing Service, the BLM existed for several decades before FLPMA. See JAMES MUHN & HANSON R. STUART, U.S. DEP'T OF THE INTERIOR, OPPORTUNITY AND CHALLENGE: THE STORY OF BLM 54 (1988).

¹⁹⁸ S. COMM. ON INTERIOR & INSULAR AFFAIRS, 94TH CONG., S. REP. NO. 94-583, at 24 (1st Sess. 1975). A few relatively minor provisions included within the Senate bill for which this report was prepared—related to grazing, mining, and applicability to national forests—were modified through a conference committee to resolve differences with the U.S. House of Representatives, but the purpose and structure of the law remained the same. See Schwartz, *supra* note 10, at 298–99.

¹⁹⁹ S. REP. NO. 94-583, at 24.

Mandate;²⁰⁰ that require the BLM to adhere to principles of multiple use and sustained yield—the Multiple Use Mandate;²⁰¹ and that compel the BLM to prevent unnecessary and undue degradation of the land—the Anti-Degradation Mandate.²⁰² These provisions can be divided into three categories based on the private activities they affect. Certain provisions of FLPMA apply to all uses of public lands, including hard rock mining. Others apply to uses except for hard rock mining.

FLPMA prioritizes retention and management of public lands to obtain long-term societal benefits.²⁰³ FLPMA repealed dozens of public land laws governing the disposal and use of public lands and through it Congress announced a general policy that public lands be retained and managed.²⁰⁴ Public lands could still be disposed, something that remains true today,²⁰⁵ but only if the federal government determined that a particular parcel would better serve the public if transferred into private hands.²⁰⁶ FLPMA thus represented a dramatic departure from prior regimes. Before FLPMA, privatization itself was thought to serve the public interest without regard to the specific lands at issue and private individuals could themselves initiate the process for transferring public lands, rather than requiring public land managers to do so.²⁰⁷ The general management directives of FLPMA do not, however, apply to hard rock mining under the Mining Law of 1872, which continues to allow miners to acquire public lands by locating valuable minerals.²⁰⁸

FLPMA's Multiple Use Mandate establishes multiple use and sustained yield as the governing principle for public land management, unless areas are designated for a specific, dominant use under other laws.²⁰⁹ The authority to implement the Multiple Use Mandate is capacious: The Act vests the Interior Secretary with authority to “regulate . . . the use and occupancy, and development of the public lands” through “easements, permits, leases, licenses, published rules, or other instruments as the Secretary deems appropriate.”²¹⁰ The phrase “multiple use” is defined in a passage that is full of texture:

²⁰⁰ 43 U.S.C. § 1711 (2018).

²⁰¹ *Id.* § 1702(c).

²⁰² *Id.* § 1732(b).

²⁰³ *Id.* § 1701(a)(1).

²⁰⁴ *Id.*

²⁰⁵ See John C. Ruple, *The Transfer of Public Lands Movement: The Battle to Take “Back” Lands That Were Never Theirs*, 29 COLO. NAT. RESOURCES, ENERGY & ENVTL. L. REV. 1, 22 (2017) (“[T]he BLM still managed to dispose of over twenty-four million acres of land between 1990 and 2010 . . .”).

²⁰⁶ 43 U.S.C. § 1713.

²⁰⁷ See *supra* notes 167–178 and accompanying text.

²⁰⁸ 43 U.S.C. § 1732(b).

²⁰⁹ *Id.* §§ 1701(a)(7), 1712(c)(1).

²¹⁰ *Id.* § 1732(b).

The term “multiple use” means the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.²¹¹

Sustained yields is defined more tersely to mean “the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.”²¹² These two definitions are mutually reinforcing, establishing a mandate requiring the BLM to delicately balance the needs of current and future generations, and economic and environmental values.

FLPMA sections 201 and 202 establish the Land Use Planning Mandate. Section 201 requires the Secretary to inventory public land resources and values, creating information about potential uses, and use conflicts, to serve as the basis for land use planning.²¹³ This inventory process is iterative and future oriented, like many of FLPMA’s provisions, and requires that the Secretary, acting through the BLM, identify and catalogue new and emerging values to prevent land use plans from becoming stale and disconnected from evolving

²¹¹ *Id.* § 1702(c).

²¹² *Id.* § 1702(h).

²¹³ *Id.* § 1711(a); *see id.* § 1712(c)(4) (requiring reliance on the § 202 inventory as the basis for land use planning); GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, PUBLIC NATURAL RESOURCES LAW § 16:20 (2d ed. 2018) (“BLM planning begins with compilation of available lands and resources.”). As well as serving as the basis for land use planning, the inventory of resources also serves as the basis for the BLM to identify wilderness study areas under § 603 of FLPMA. 43 U.S.C. § 1782. Nonetheless, the federal government has long taken the position that the § 603 identification of wilderness study areas, unlike the § 202 inventory process, is not an ongoing source of authority. *See Utah v. Norton*, No. 2:96-CV-0870, 2006 WL 2711798, at *8 (D. Utah Sept. 20, 2006), *aff’d*, *Utah v. U.S. Dep’t of Interior*, 535 F.3d 1184 (10th Cir. 2008).

societal needs.²¹⁴ To make that concrete, consider wind on public lands. In 1976, the BLM may not have recognized wind as an important resource, but as wind technology has improved and the demand for renewable energy has increased, FLPMA requires the agency to inventory this resource.²¹⁵

Section 202 requires the BLM to develop and revise land use plans—referred to as resource management plans (RMPs)—to govern the use of public lands based on inventories of resources and values.²¹⁶ FLPMA requires the development and revision of RMPs because the “national interest” would be served if public lands’ “present and future use is projected through a land use planning process coordinated with other Federal and State planning efforts.”²¹⁷ Although statutory directives guide land use planning—for example that the Secretary must “use and observe the principles of multiple use and sustained yield,” and “give priority to the designation and protection of areas of critical environmental concern”²¹⁸—the mechanics of the land use planning process are largely left for the Secretary to decide, so long as “Federal, State, and local governments and the public” have adequate opportunities to participate.²¹⁹ Once the BLM promulgates an RMP, it must comply with its terms when making management decisions.²²⁰

Finally, section 302 establishes the Anti-Degradation Mandate and, unlike other provisions of FLPMA, this mandate applies to hard rock mining activities as well as all other land uses. Section 302(b) provides that “[i]n managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.”²²¹ It also directs that “[e]xcept as provided” by the Anti-Degradation Mandate, and a few other miscellaneous provisions of FLPMA, “no provision . . . of this Act shall in any way amend the Mining Law of 1872 or impair the rights of any locators or claims under that Act.”²²² The negative implication of that sentence is, of course, that the Anti-Degradation Mandate amends the Mining Law of 1872 and can modify and limit the rights of miners.

²¹⁴ 43 U.S.C. § 1711(a) (“This inventory shall be kept current so as to reflect changes in conditions and to identify new and emerging resource and other values.”).

²¹⁵ See, e.g., Instruction Memorandum (No. 2009-043) from Dir., Bureau of Land Mgmt., to All Field Officials, Bureau of Land Mgmt. (Dec. 19, 2008), http://blmwyomingvisual.anl.gov/docs/IM_2009-043_BLMWindEnergyDevelopmentPolicy.pdf [https://perma.cc/M7AM-UZ2P].

²¹⁶ 43 U.S.C. § 1712(a).

²¹⁷ *Id.* § 1701 (a)(2).

²¹⁸ *Id.* § 1712(c)(1), (c)(3).

²¹⁹ *Id.* § 1712(f).

²²⁰ *Id.* § 1732(a).

²²¹ *Id.* § 1732(b).

²²² *Id.*

III. AUTHORITY FOR COMPENSATORY MITIGATION ON PUBLIC LANDS

This Part revisits the Land Use Mandate, Multiple Use Mandate, and Anti-Degradation Mandate and explains that these interwoven statutory directives provide the BLM with ample authority to require compensatory mitigation.²²³ To aid in this examination, this Part first provides a schematic of the categories of decisions made by the BLM and links them to sources of statutory authority.²²⁴ It closes with an assessment of what, if any, deference is owed to the BLM's current, contrary view that it lacks authority to require compensatory mitigation.²²⁵

A. Categorizing Management Decisions

The BLM manages public lands through nested decisions, with each more specific tier relying on or incorporating those made at a prior, more general tier. For example, a decision to approve an oil well may involve each of the following steps: (1) adopting or amending an RMP to identify oil and gas development as an allowable use of the relevant public lands,²²⁶ (2) authorizing a party to explore for oil and gas resources and identifying terms and conditions to be followed during prospecting,²²⁷ (3) receiving notice that exploration is complete and determining if “rehabilitation of the lands is satisfactory,”²²⁸ (4) receiving a nomination for competitive leasing, evaluating the public lands included in the nomination, deciding whether to include them in a lease sale, and, if so, noticing the lease sale,²²⁹ (5) determining what royalty rate and which conditions and stipulations to include in the offered leases,²³⁰ (6) holding a public auction and issuing leases to winning bidders,²³¹ and (7) approving an “Application for Permit to Drill” (APD) submitted by a lease-holder and determining what, if any, additional environmental conditions should be im-

²²³ See *infra* notes 226–318 and accompanying text.

²²⁴ See *infra* notes 226–305 and accompanying text.

²²⁵ See *infra* notes 306–318 and accompanying text.

²²⁶ Until recently, the BLM developed a Master Leasing Plan following adoption of an RMP to govern oil and gas leasing in an area. Instruction Memorandum (No. 2013-101) from Acting Dir., Bureau of Land Mgmt., to State Dirs., Bureau of Land Mgmt. (Jan. 28, 2013), <https://www.blm.gov/policy/im-2013-101-0> [<https://perma.cc/4ZZR-2WSR>]. The BLM has, however, announced it will no longer do so because it views this process as duplicative of the RMP. Instruction Memorandum (No. 2018-034) from Deputy Dir., Bureau of Land Mgmt., to All Field Officials, Bureau of Land Mgmt. (Jan. 31, 2018), <https://www.blm.gov/policy/im-2018-034> [<https://perma.cc/4Z8G-WEA4>].

²²⁷ 43 C.F.R. § 3151.1 (2019). The BLM refers to this authorization as a “Notice of Intent to Conduct Oil and Gas Exploration Operations.” *Id.* Similar procedures apply to oil and gas exploration activities in Alaska pursuant to a different set of regulations. See *id.* §§ 3152.1–.7.

²²⁸ *Id.* § 3151.2.

²²⁹ *Id.* §§ 3120.1–.4.

²³⁰ *Id.* § 3120.4-1.

²³¹ *Id.* § 3120.5.

posed on drilling activities.²³² This set of processes includes at least three opportunities for the BLM to impose compensatory mitigation requirements, which can be categorized as planning decisions, non-project-approval implementation decisions, and project approval.²³³ Similar categories of decision exist for other land uses—e.g., transmission lines, wind farms, and grazing—although here too FLPMA treats hard rock mining differently, because the BLM does not lease hard-rock minerals and has limited authority to regulate mining through the process of land use planning.²³⁴

The Sections that follow examine FLPMA's provisions and explain how they authorize compensatory mitigation in appropriate circumstances. The table below indicates which of these authorities applies to which category of decisions.

Tier of Decision	Examples	Subject to Land Use Planning Mandate	Subject to Multiple Use Mandate	Subject to Anti-Degradation Mandate
Land Use Planning	Resource Management Plan	Always	Always	Maybe
Implementation	Travel Management Plan, Lease Sale	Always	Always	Always
Project Approval (other than hard rock mining)	APD, Grazing Permit, Right-of-Way	Always	Always	Always
Hard Rock Mining Approval	Plan of Operations	Maybe	No	Always

The broadest scale of public land management occurs through the adoption and revision of RMPs.²³⁵ The Secretary has delegated land use planning to the BLM,²³⁶ which has issued regulations to govern the planning processes.²³⁷ RMPs resemble comprehensive zoning ordinances adopted by state and local

²³² *Id.* § 3162.3-1.

²³³ Some implementation decisions, like travel management planning, share features with the land use planning more generally. The distinction remains an important one, however, because it affects how interested parties may pursue administrative appeals or protests. *See* BUREAU OF LAND MGMT., LAND USE PLANNING HANDBOOK H-1601-1, at app. E (2005) [hereinafter LAND USE PLANNING HANDBOOK], <https://eplanning.blm.gov/epl-front-office/projects/lup/69026/89780/107362/h1601-1.pdf> [<https://perma.cc/FKH6-DPGL>] (discussing appeal and protest procedures for land use and implementation decisions).

²³⁴ 43 U.S.C. § 1732(b) (2018).

²³⁵ *See supra* notes 216–220 and accompanying text.

²³⁶ BUREAU OF LAND MGMT., DEPARTMENTAL MANUAL (235 DM 1), at 1 (2009), https://www.doi.gov/sites/doi.gov/files/elips/documents/chapter_1_general_program_delegation_director_bureau_of_land_management.pdf [<https://perma.cc/74ZM-3FBB>] (“The Director, Bureau of Land Management, is authorized . . . to exercise the program authority of the Assistant Secretary[,] Land and Minerals Management with respect to the management of the public domain and acquired lands, including all associated functions that relate thereto.”).

²³⁷ *See* 43 C.F.R. §§ 1601.0-1–1610.8 (2019).

land use planning agencies and provide a basic blueprint for land uses within their geographical scope. As the regulations explain, an RMP is “designed to guide and control future management actions and the development of subsequent, more detailed and limited scope plans for resources and uses.”²³⁸ The BLM typically develops an RMP for the public lands within a state managed by each field office.²³⁹ Like all BLM decisions, RMPs are formally subject to the Anti-Degradation Mandate, although courts have allowed the BLM to defer compliance with this obligation until implementation and project approval decisions.²⁴⁰ Hard rock mining is generally exempted from the BLM’s land use planning authority, except to the extent that the BLM decides to address the Anti-Degradation Mandate through the planning process.²⁴¹

As their name suggests, implementation decisions carry out RMPs. The BLM has generally defined all decisions other than the adoption or amendment of RMPs as falling into this category.²⁴² Nonetheless, important differences exist between decisions that implement RMPs at a general level, like leasing decisions, and those that approve the projects of specific parties. Although implementation decisions are not themselves subject to the Land Use Planning Mandate, they must be consistent with the applicable RMP and they must satisfy the Multiple Use and Anti-Degradation Mandates.²⁴³

Project approvals also must conform to the applicable RMP and any higher-order implementation decisions.²⁴⁴ So, for example, the BLM can only issue an APD that incorporates conditions identified in the RMP and the lease itself. Project approvals also must themselves comply with the Multiple Use and Anti-Degradation Mandates. Because project approvals often crystalize the environmental effects of a land use, some environmental effects can most easily be addressed at this stage, although where the BLM is authorizing development of resources that have already been leased, equitable and contract considerations may impose limits on what new conditions can be imposed.²⁴⁵ The BLM gen-

²³⁸ *Id.* § 1601.0-2.

²³⁹ *Id.* § 1610.1(b).

²⁴⁰ *See* Mineral Policy Ctr. v. Norton, 292 F. Supp. 2d 30, 44 (D.D.C. 2003) (accepting the Department of the Interior’s representation that “it will protect the public lands from any UUD by exercising case-by-case discretion”).

²⁴¹ 43 U.S.C. § 1732(b).

²⁴² *See* LAND USE PLANNING HANDBOOK, *supra* note 233, at app. E.

²⁴³ *See* 43 U.S.C. § 1732(a) (“The Secretary shall manage the public lands under principles of multiple use and sustained yield, in accordance with the land use plans . . . when they are available . . .”).

²⁴⁴ *Id.*

²⁴⁵ *See, e.g.,* Memorandum from Solicitor, Dep’t of the Interior, to Assistant Sec’y for Policy, Management & Budget et al. 4 (May 13, 2003), <https://doi.opengov.ibmcloud.com/sites/doi.opengov.ibmcloud.com/files/uploads/M-37008.pdf> [<https://perma.cc/B8K4-YN8C>] (noting authority of Secretary to cancel grazing permit through FLPMA’s land use planning process); Jan G. Laitos & Richard

erally has a more limited ability to impose conditions when authorizing the development of resources already subject to a lease that would effectively preclude development altogether than if it had included such conditions in a lease when it was issued (or simply decided not to issue a lease at all).²⁴⁶ Project approvals typically are also the point at which the BLM ensures that hard rock mining operations do not violate the Anti-Degradation Mandate.²⁴⁷

B. Applying the Multiple Use Mandate

FLPMA departs from earlier paradigms of public land law because it rejects privatization as the primary policy instrument for public land management and the development of a few, preferred land uses as the primary goal.²⁴⁸ Instead, the Multiple Use Mandate embraces a multiplicity of conflicting, evolving, and sometimes controversial uses and values of importance to the American people; furthermore, in conjunction with the statute's management authority provisions, it vests the BLM with broad authority to provide for those uses across the vast expanse of lands in its charge.²⁴⁹ The Mandate establishes the polestar for all public land management, other than hard rock mining, and directs the BLM to take both a broad and long view of the social values adhering to public lands and the benefits that potentially conflicting uses can provide.²⁵⁰ Although the BLM need not always prioritize the environment over other uses, compensatory mitigation offers a means to address resource conflicts and provide for long-term multiple uses of public lands because it enables one use to occur—e.g., oil drilling—while offsetting impacts to other uses—e.g., wildlife habitat.²⁵¹

Statutes through which Congress delegates land management authority to the Executive Branch, like the Multiple Use Mandate, are broadly construed, because “[i]n the nature of things it was impracticable for Congress to provide

A. Westfall, *Government Interference with Private Interests in Public Resources*, 11 HARV. ENVTL. L. REV. 1, 14 (1987) (discussing government authority over leased interests in public lands).

²⁴⁶ Where the BLM determines that a project violates the Anti-Degradation Mandate, the BLM may, and indeed must, either deny the permit or include whatever conditions are necessary to avoid that result. See Debra L. Donahue, *Federal Rangeland Policy: Perverting Law and Jeopardizing Ecosystem Services*, 22 J. LAND USE & ENVTL. L. 299, 347–48 (2007) (“If a miner’s vested property interest in public lands may be regulated to the point of prohibiting a ‘necessary’ mining operation because it would ‘unduly harm’ the land, exercise of the grazing ‘privilege’ certainly may be prohibited for the same reason.”).

²⁴⁷ See *Mineral Policy Ctr.*, 292 F. Supp. 2d at 44.

²⁴⁸ See *supra* notes 162–186 and accompanying text.

²⁴⁹ See LEGISLATIVE HISTORY OF FLPMA, *supra* note 40, at vi.

²⁵⁰ See *supra* notes 209–212 and accompanying text.

²⁵¹ See Hein, *supra* note 69, at 40 (arguing that “Interior has discretion to carry out its capacious statutory mandates in a manner that seeks to maximize social welfare”).

general regulations for the[] various and varying details of management.”²⁵² Thus, the Supreme Court held in 1911 in *United States v. Grimaud* that a provision authorizing the Secretary of Agriculture to “regulate the[] occupancy and use [of National Forests], and to preserve the forests thereon from destruction” encompasses authority to require grazing permits and to “charge for the privilege of grazing sheep on the reserve.”²⁵³ Although the Secretary’s authority is not unlimited, Congress empowered him to manage the lands in his care in pursuit of the “matters clearly indicated” by Congress.²⁵⁴ Put differently, the grant of authority to regulate occupancy and use of National Forests includes the power to preserve them through mechanisms determined appropriate by the Department of Agriculture.²⁵⁵ FLPMA includes remarkably similar language, enabling the BLM to “regulate . . . occupancy and use” in furtherance of the Multiple Use Mandate,²⁵⁶ and the extent of that authority should similarly be construed to encompass management tools, like compensatory mitigation, that advance the objectives established by Congress.

The breadth of the objectives that comprise the Multiple Use Mandate reinforce the breadth of BLM’s authority, because Congress recognized that public lands serve a panoply of “competing values . . . as diverse as the lands themselves.”²⁵⁷ As the BLM explained when developing its original regulations to govern land use planning, the agency must consider the full range of public lands resources “includ[ing] all public land values; renewable and non-renewable resources of all types.”²⁵⁸ The BLM has long recognized that the temporal dimension of the Multiple Use Mandate means that the agency must not only address conflicts among uses today, but also “indicate the direction of any change needed in resource use or management” to address the needs of tomorrow.²⁵⁹

²⁵² *United States v. Grimaud*, 220 U.S. 506, 516 (1911); see *United States v. Rock Royal Coop., Inc.*, 307 U.S. 533, 574 (1939) (“From the earliest days the Congress has been compelled to leave to the administrative officers of the Government authority to determine . . . the details of regulations which would implement the more general enactments.”).

²⁵³ 220 U.S. at 515, 522.

²⁵⁴ *Id.* at 522.

²⁵⁵ *United States v. Hymans*, 463 F.2d 615, 617 (10th Cir. 1972) (“As long as such rules and regulations tend to protect the lands and faithfully preserve the interest of the people of the whole country in the lands, the courts should enforce such rules and regulations.” (quoting *United States v. Reeves*, 39 F. Supp. 580, 583 (W.D. Ark. 1941))).

²⁵⁶ 43 U.S.C. § 1732(a).

²⁵⁷ *Rocky Mountain Oil & Gas Ass’n v. Watt*, 696 F.2d 734, 738 (10th Cir. 1982).

²⁵⁸ Planning, Programming, and Budgeting, 43 Fed. Reg. 58,764, 58,765 (Bureau of Land Mgmt. Dec. 15, 1978) (proposed rule). The regulations were finalized in 1979. Public Lands and Resources; Planning, Programming, and Budgeting, 44 Fed. Reg. 46,386 (Aug. 7, 1979) (to be codified at 43 C.F.R. pt. 1600).

²⁵⁹ Planning, Programming, and Budgeting, 43 Fed. Reg. at 58,766.

The Multiple Use Mandate allows for substantial debate and contestation about which uses should be prioritized, how much, and where. Unlike earlier laws designed to privatize public lands,²⁶⁰ it does not, however, permit decisions blinkered to future generations or elevating short-term private profit over long-term public interests.²⁶¹ Although the Multiple Use Mandate encompasses numerous uses of public lands from which private entities may profit, benefiting private interests is not its goal. That energy production is among the identified uses, for example, does not mean that the law aims to profit oil companies. Every use of public lands is valued because of the benefits provided to the public.²⁶² Put differently, oil development on public lands occurs not to enrich oil companies and executives, but to create a stable energy supply, promote national security interests, and generate revenue that can be used to carry out the business of the federal government. To provide an example with less political valence, when the BLM adopted its Special Recreation Permit Policy in 1984 to govern the issuance of permits to commercial recreation businesses, it explained “[t]he key objective for the BLM is dependable, safe service to the public. While the Bureau does not have an obligation to guarantee financial success to a commercial permittee, economically healthy operators are in a much better position to provide safer, more enjoyable trips, which is clearly in the best interest of the public.”²⁶³

The Multiple Use Mandate does not, of course, mean that the BLM must manage all public lands for all uses. Such a task would be impossible, particularly in circumstances that involve absolute use conflicts.²⁶⁴ Oil drilling may displace recreation; off-road vehicle use may destroy habitat. Rather, the BLM has significant discretion to engage in “delicate balancing” to determine which uses should be accommodated in which areas, although this discretion should be tethered to evolving understanding of public lands, their ecosystems, and the array of services they provide.²⁶⁵ The BLM must also account for the seri-

²⁶⁰ See *supra* notes 162–172 and accompanying text.

²⁶¹ Gifford Pinchot encapsulated the Multiple Use Mandate, although it had not yet been articulated in law, in a 1905 letter of instructions he sent to the U.S. Forest Service, explaining: “[A]ll land is to be devoted to its most productive use for the permanent good of the whole people, and not for the temporary benefit of individuals or companies . . . [W]here conflicting interests must be reconciled the question will always be decided from the standpoint of the greatest good of the greatest number in the long run.” Keiter, *supra* note 148, at 1159–60 (quoting GIFFORD PINCHOT, *BREAKING NEW GROUND* 261 (1947)).

²⁶² See 43 U.S.C. § 1702(c) (2018).

²⁶³ Special Recreation Permit Policy, 49 Fed. Reg. 5300, 5301 (Bureau of Land Mgmt. Feb. 10, 1984) (to be codified at 43 C.F.R. pt. 8560).

²⁶⁴ See *supra* notes 16–18 and accompanying text.

²⁶⁵ *New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 710 (10th Cir. 2009); see *Friends of the Bow Predator Project*, 139 Interior Dec. 141, 143–44 (IBLA 1997) (“[N]ot every possible use can take place fully on any given area of public lands at any one time.”).

ous and direct economic injury that can result from environmental degradation. In an era in which private markets have developed to facilitate payments for the ecosystem services provided by private property,²⁶⁶ public land managers should consider them too as among the mix of uses provided by public lands. Compensatory mitigation offers a vital tool to accomplish multiple use management because it carves a middle path between barring a use entirely and allowing it to proceed without offsetting its impacts. Through it, the BLM may dedicate an area of public lands to large-scale industrial extractive activities while ensuring that the uses and values eliminated or degraded from those activities can flourish elsewhere.

FLPMA does not, therefore, require compensatory mitigation to offset all impacts, and indeed attempting to do so would itself be a virtually impossible task. Rather, the BLM has broad discretion to decide which uses to accommodate through compensatory mitigation, or other management instruments at its disposal.²⁶⁷ The Multiple Use Mandate would even allow the BLM to determine that a particular use no longer serves societal needs and should not be facilitated at all, because Congress expressly recognized that the “needs and conditions” of public lands may change.²⁶⁸ For example, science has disproven the nineteenth century belief that planting trees in arid climates will draw rain.²⁶⁹ If someone sought to grow forest on public lands for the purpose of controlling rainfall, the BLM could reasonably decide that it need not consider this as a use in the mix for which it manages.²⁷⁰ This broad discretion to select uses and manage conflicts among them does not, however, undermine the legitimacy of compensatory mitigation as a tool for managing those uses deemed appropriate.

C. Implementing the Land Use Planning Mandate

When Congress enacted FLPMA, compensatory mitigation was a familiar land use planning tool for municipal planners, and it is therefore a component of the Land Use Planning Mandate.²⁷¹ The drafters of FLPMA understood that “land use planning” was “a term now in general usage and permits a large va-

²⁶⁶ See, e.g., James Salzman et al., *Payments for Ecosystem Service: Past, Present and Future*, 6 TEX. A&M L. REV. 199, 200 (2018) (describing the development of payment for ecosystem services).

²⁶⁷ See *Theodore Roosevelt Conservation P'ship v. Salazar*, 616 F.3d 497, 518 (D.C. Cir. 2010) (“[T]he Bureau has wide discretion to determine how those principles [of multiple use management] should be applied.”); *Strickland v. Morton*, 519 F.2d 467, 469 (9th Cir. 1975) (describing the multiple use management as “breath[ing] discretion at every pore”).

²⁶⁸ 43 U.S.C. § 1702(c).

²⁶⁹ See *supra* note 169 and accompanying text.

²⁷⁰ Professor Deborah Donahue has argued that grazing should no longer be considered a legitimate use of public lands because of its insignificance for food production and the considerable harms it poses. Donahue, *supra* note 246, at 299.

²⁷¹ See *supra* notes 55–64 and accompanying text.

riety of techniques and procedures.”²⁷² Interpreting FLPMA based on the contemporaneous meaning of that phrase follows familiar tools of statutory construction,²⁷³ particularly because it constitutes a term of art that should be construed based on the “body of learning from which it was taken.”²⁷⁴

The historical record is clear. By 1976, land use planning had been a cornerstone of local and state governments for decades.²⁷⁵ Municipal governments first engaged in land use planning in the early twentieth century, and New York City adopted the first comprehensive zoning ordinance in 1916.²⁷⁶ Only a decade later, the Department of Commerce published a Standard City Planning Enabling Act to promote municipal land use planning.²⁷⁷ By 1926 more than half of the U.S. population lived in a municipality that had adopted comprehensive zoning.²⁷⁸ Many land use planning agencies require developers to offset the impacts of their development through exactions, including by paying impact fees or dedicating land, and the Supreme Court has validated this approach as an appropriate mechanism to require that property owners internalize the costs associated with their activities.²⁷⁹ By expressly requiring the BLM to “develop, maintain, and when appropriate, revise land use plans which provide by tracts or areas for the use of the public lands,”²⁸⁰ FLPMA authorizes the ordinary and traditional techniques of land use planning, including compensatory mitigation, to “insure that actions on public lands are based upon the best available information and sound land use planning.”²⁸¹ Moreover, the legislative history indicates that Congress understood mitigation to be a legitimate tool of land use

²⁷² H.R. COMM. ON INTERIOR & INSULAR AFFAIRS, 94TH CONG., H.R. DOC. NO. 94-1163, at 5 (2d Sess. 1976).

²⁷³ See, e.g., *Wis. Cent. Ltd. v. United States*, 138 S. Ct. 2067, 2074 (2018) (“[I]t’s a ‘fundamental canon of statutory construction’ that words generally should be ‘interpreted as taking their ordinary, contemporary, common meaning . . . at the time Congress enacted the statute.’” (quoting *Perrin v. United States*, 444 U.S. 37, 42 (1979))).

²⁷⁴ *Morissette v. United States*, 342 U.S. 246, 263 (1952) (“[W]here Congress borrows terms of art . . . it presumably knows and adopts the cluster of ideas that were attached to each borrowed word in the body of learning from which it was taken . . .”).

²⁷⁵ See *supra* Part II.A.

²⁷⁶ See John R. Nolon, *Zoning’s Centennial: A Complete Account of the Evolution of Zoning into a Robust System of Land Use Law—1916–2016 (Part I)*, 39 ZONING & PLANNING L. REP. 1, 1 (2016).

²⁷⁷ See generally U.S. DEP’T OF COMMERCE, *supra* note 59.

²⁷⁸ Herbert Hoover, *Foreword to U.S. DEP’T OF COMMERCE, A STANDARD STATE PLANNING ENABLING ACT*, at iii (rev. ed. 1926).

²⁷⁹ See *Koontz v. St. Johns River Water Mgmt. Dist.*, 570 U.S. 595, 605 (2013).

²⁸⁰ 43 U.S.C. § 1712(a) (2018).

²⁸¹ Planning, Programming, and Budgeting, 43 Fed. Reg. at 58,764. Further underscoring its recognition that Congress intended it to draw upon the discipline of land use planning, the BLM contracted with the American Society of Planning Officials to evaluate the planning procedures it would need to fully implement FLPMA. *Id.*

planning, because the Public Land Law Review Commission Report describes potential zoning classifications incorporating mitigation requirements.²⁸²

FLPMA directs the BLM to develop regulations to govern its planning process, which it first did in 1979, just three years after Congress enacted FLPMA.²⁸³ These regulations are largely procedural in nature, and it is therefore not surprising that they do not address the potential for RMPs to require mitigation measures in any degree of detail. The regulations do, however, require that “for all uses the plan establishes appropriate terms and conditions to insure coordination and resource protection.”²⁸⁴ RMPs shall identify actions needed for “[r]esource protection, such as avoidance or mitigation of trespass, fire or insect damage.”²⁸⁵ RMPs must also include “general management practices and uses, including mitigating measures, identified to protect” areas determined to be of critical environmental concern.²⁸⁶ And for mitigation measures that are adopted in RMPs, a plan for monitoring and evaluation must be included to “determine whether mitigation measures are satisfactory.”²⁸⁷ BLM’s contemporaneous understanding demonstrates that the agency itself understood the Land Use Planning mandate to encompass at least some mitigation, and because the term mitigation in the context of environmental law had already come to mean avoidance, minimization, and compensation, the regulations suggest that compensatory mitigation, in addition to avoidance measures, is a permissible land use planning tool.²⁸⁸

By logical extension, the Land Use Planning Mandate also authorizes the BLM to require compensatory mitigation in implementation and project approval decisions. The BLM is authorized to “issue management decisions to implement land use plans,”²⁸⁹ and municipal land use agencies often impose

²⁸² ONE THIRD OF THE NATION’S LAND, *supra* note 1, at 78–79. The table identifies potential zones that “could be used in public land administration” by agencies implementing the Planning Mandate. *Id.* at 77. While the BLM may not have adopted those zoning classifications, the point remains that Congress understood that land use planning could incorporate mitigation requirements.

²⁸³ The now-overridden 2016 planning regulations contemplated that RMPs would address compensatory mitigation. *See* Resource Management Planning, 81 Fed. Reg. 89,580, 89,594 (Dec. 12, 2016) (to be codified at 43 C.F.R. pt. 1600) (“By including this definition [of mitigation] in the planning regulations, the BLM acknowledges that . . . [the mitigation hierarchy] also applies to the planning process.”); *see also* MCGARITY ET AL., *supra* note 122, at 20 (noting the Congressional Review Act overrode the 2016 planning rule).

²⁸⁴ Planning, Programming, and Budgeting, 43 Fed. Reg. at 58,766.

²⁸⁵ 43 C.F.R. § 1601.0-5(m)(6)(i) (2019); *see* Public Lands and Resources; Planning, Programming, and Budgeting, 44 Fed. Reg. at 46,393.

²⁸⁶ Public Lands and Resources; Planning, Programming, and Budgeting, 44 Fed. Reg. at 46,393.

²⁸⁷ *Id.* at 46,398.

²⁸⁸ *See supra* note 70 and accompanying text.

²⁸⁹ 43 U.S.C. § 1712(e).

compensatory mitigation through permitting processes in addition to generally applicable zoning codes.²⁹⁰

What would compensatory mitigation look like as part of the BLM's land use planning process? In designating areas potentially available for oil leasing, for example, an RMP could require that leases and APDs issued for activities within the geographic extent of the plan include measures to offset impacts to particular resources, just as did the RMP amendments implementing the greater sage-grouse conservation plans.²⁹¹ Such a requirement might necessarily be less specific than the type of tailored conditions that could be incorporated in later decisions related to identifiable and specific tracts of public lands. That is, however, a feature of all public lands management that establishes policies at higher levels of generality to provide direction for subsequent implementation decisions.

D. Effectuating the Anti-Degradation Mandate

Unlike FLPMA's other mandates, the Anti-Degradation Mandate preferences environmental protection—at least to an extent—above other land uses, providing a third source of authority for compensatory mitigation requirements. It demands that the BLM “shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the land.”²⁹² This obligation is more encompassing than the Multiple Use and Land Use Planning Mandates, because it applies to all BLM decisions, including those related to hard rock mining. Yet it is also a more limited source of authority, because it does not authorize broad balancing among competing uses, but rather serves as a minimum standard of environmental protection.

FLPMA does not define the phrase “unnecessary and undue degradation,” but if such degradation is threatened, section 302 is both obligatory and capacious.²⁹³ The BLM must take “any action” necessary, a phrase included in the statute without qualification. By identifying “regulation” as one variety of action, FLPMA indicates that the actions contemplated encompass administrative actions.²⁹⁴ Put differently, section 302 need not be read to require the BLM to

²⁹⁰ See Pidot, *supra* note 62, at 137.

²⁹¹ See Greater Sage-Grouse Finding, *supra* note 26, at 59,858.

²⁹² 43 U.S.C. § 1732(b).

²⁹³ *Id.*; see *Kingdomware Techs., Inc. v. United States*, 136 S. Ct. 1969, 1977 (2016) (“Unlike the word ‘may,’ which implies discretion, the word ‘shall’ usually connotes a requirement.”).

²⁹⁴ As a rule of thumb, the principle of *eiusdem generis* suggests that “when a general term follows a specific one, the general term should be understood as a reference to subjects akin to the one with specific enumeration.” *Norfolk & W. Ry. Co. v. Am. Train Dispatchers’ Ass’n*, 499 U.S. 117, 129 (1991). Context can indicate to the contrary, but FLPMA generally concerns the management of public lands through processes governed by principles of administrative law and understanding the

send its employees into the field with picks and shovels to rectify environmental harms, but rather that the agency may avail itself of the apparatus of administrative law—rulemaking, adjudication, licenses, and the like—to prevent them. The BLM must, of course, proceed in a lawful fashion, placing some limitation on what could constitute permissible actions. It cannot, for example, violate constitutional rights in its efforts to protect public lands. But the BLM can—and for many years has—required compensatory mitigation through run-of-the-mill administrative actions like issuing permits or other approvals.²⁹⁵ Those actions comfortably fall within the universe of actions encompassed by section 302.

The BLM must act, however, only if required to do so to prevent harms that are unnecessary or undue. Those two words—unnecessary and undue—focus the BLM’s attention in different directions. The word undue addresses the severity of the impacts of a proposed use, and whether those impacts exceed a threshold rendering them unacceptable.²⁹⁶ The word unnecessary, on the other hand, addresses the need for impacts to occur as a component of an authorized activity.²⁹⁷ This difference in meaning suggests that a finding that an impact is unnecessary should lend itself to modifying a proposed activity, because the impacts need not occur for the project to move forward, while a finding that an impact is undue may require a bar to the activity altogether.

Notwithstanding the breadth of section 302, it has received little attention in the courts, although those that have considered claims that the BLM has failed to fulfill the Anti-Degradation Mandate have generally viewed the agency as enjoying substantial discretion. In 2013 in *Western Watersheds Project v. Abbey*, for example, the Ninth Circuit explained that section 302 “does not mandate specific BLM action” and that the BLM has discretion “to choose

word “action” as the word is used in administrative law places sensible limits on the obligation imposed by section 302. *Id.*

²⁹⁵ The BLM’s regulations require hard rock miners to comply with “mitigation measures specified by BLM to protect public lands.” See 43 C.F.R. § 3809.420(a)(4) (2019). They must comply before engaging in any large-scale mining activities that require approval of a plan of operations. See *id.* § 3809.11(a). No definition of mitigation is provided, but in its preamble, the BLM suggested that its regulations were “necessary for the identification, prevention, or mitigation of environmental impacts associated with mining.” See Mining Claims Under the General Mining Laws; Surface Management, 66 Fed. Reg. 54,834, 54,847 (Bureau of Land Mgmt. Oct. 30, 2001) (suggesting that the term mitigation encompasses more than merely avoiding or minimizing impacts).

²⁹⁶ See *Theodore Roosevelt Conservation P’ship v. Salazar*, 661 F.3d 66, 76 (D.C. Cir. 2011) (inquiring as to whether the BLM “will implement sufficient measures to prevent degradation unnecessary to, or undue in proportion to, the development” being authorized); see also *Undue*, BLACK’S LAW DICTIONARY, *supra* note 52 (“Excessive or unwarranted . . .”).

²⁹⁷ See *Utah v. Andrus*, 486 F. Supp. 995, 1005 n.13 (D. Utah 1979) (defining unnecessary impacts in context of hard rock mining to mean “that which is not necessary for mining”); see also *Unnecessary*, BLACK’S LAW DICTIONARY, *supra* note 52 (“Not required under the circumstances; not necessary.”).

appropriate measures.”²⁹⁸ In another leading case, the D.C. District Court in 2003 in *Mineral Policy Center v. Norton* ruled that the BLM can choose whether to effectuate the Anti-Degradation Mandate through land use planning or through a case-by-case basis as it considers individual projects.²⁹⁹

At the same time, experience suggests that the Anti-Degradation Mandate includes enforceable content. The Interior Department has taken conflicting views about the meaning of the mandate, which courts have reviewed and corrected. Consistent with the statutory language, a 1999 Solicitor’s Opinion explained that the conjunctive “or” between the words “unnecessary” and “undue” meant that the BLM had both the power to address avoidable degradation, which would be unnecessary, and also to address unavoidable, but sufficiently severe degradation, which would be undue.³⁰⁰ In 2001, the Department essentially abandoned that position, and interpreted the two words as “similar terms . . . or as equivalents,” with the result that it viewed itself as lacking authority to prohibit hard rock mining (or other) activities with severe, irreducible impacts.³⁰¹ The D.C. District Court in *Mineral Policy Center* rejected that interpretation, explaining that the BLM must “prevent, not only unnecessary degradation, but also degradation that, while necessary . . . is undue or excessive.”³⁰²

Compensatory mitigation could address either aspect of the Anti-Degradation Mandate.³⁰³ An activity could have dramatic—i.e., undue—environmental consequences in the absence of offsetting activity, and impacts may be deemed unnecessary where cost-effective compensatory mitigation exists, and where its implementation would not render a project uneconomic or impracticable.³⁰⁴ For example, construction of a phosphate mine could cause

²⁹⁸ 719 F.3d 1035, 1044 (9th Cir. 2013).

²⁹⁹ See 292 F. Supp. 2d at 44.

³⁰⁰ See Memorandum (M-36999) from Solicitor, Dep’t of the Interior, to Sec’y et al., Dep’t of the Interior (Dec. 27, 1999) (“The conjunction ‘or’ between ‘unnecessary’ and ‘undue’ speaks of a Secretarial authority to address separate types of degradation—that which is ‘unnecessary’ and that which is ‘undue.’”).

³⁰¹ See Memorandum (M-37007) from Solicitor, Dep’t of the Interior, to Sec’y, Dep’t of the Interior (Oct. 23, 2001) (“We cannot automatically assume that the terms [unnecessary or undue] are disjunctive alternatives with entirely separate meanings.”).

³⁰² 292 F. Supp. 2d at 43.

³⁰³ For a compelling argument that the BLM can, and should, require users extracting fossil fuels from public lands to pay a carbon fee as compensatory mitigation for climate impacts, see Burger, *supra* note 10, at 317–18.

³⁰⁴ Even when viewed independently, “undue degradation” is susceptible to multiple meanings. It could mean degradation that is too severe, meeting the definition in BLM regulations promulgated in 2000 (and amended shortly thereafter) prohibiting “substantial irreparable harm to significant resources.” Mining Claims Under the General Mining Laws; Surface Management, 65 Fed. Reg. 69,998, 70,001 (Nov. 21, 2000) (to be codified at 43 C.F.R. pt. 2090, et al.). That formulation would appear to focus exclusively on environmental harm. Alternatively, environmental harm could be undue taking account both of its severity and the nature and importance of the activity that causes it. See

undue degradation if pollution emanating from it would make nearby waterways uninhabitable by aquatic species. Requiring the mining company to address other sources of pollution in the watershed could address this undue degradation. Alternately, if the mine degraded water quality to a lesser degree, but offsetting activities were inexpensive, the degradation would be unnecessary. In considering the mine, the BLM likely enjoys substantial discretion to assess the severity of harms and consider the cost of offsetting action to determine if threatened degradation is unnecessary or undue. If it concludes that such degradation would occur, the BLM would have ample authority to determine whether to require the mine to address impacts through compensatory mitigation or through other means.

The Anti-Degradation Mandate may, however, limit the BLM's authority because it relates only to degradation of land. By extension, it may support only those measures needed to offset land impacts. To put this differently, other provisions of FLPMA enable the BLM to consider and manage conflicts among the panoply of uses of public lands, but the Anti-Degradation Mandate only targets the ill-effects of use on the public lands themselves. Many environmental impacts have an adequate nexus to the land itself to qualify, but arguments may exist about impacts to air or climate that are attenuated from the immediate public lands occupied. Would a use resulting in direct wildlife mortality degrade the lands, for example, if a wind turbine killed birds in flight? Perhaps so, if the BLM could reasonably articulate the connection between birds killed by the turbine and the health of public lands.³⁰⁵

E. Reconsidering the Disclaimer of Authority

As explained in the Sections above, FLPMA's history, structure, and language support the BLM possessing three general authorities to require compensatory mitigation. The BLM has recently taken a contrary view.³⁰⁶ Are those indicia sufficiently clear to overcome the deference courts afford to agencies interpreting the statutes they implement? This Section examines the BLM's current policy and explains that its character is such that under existing administrative law doctrine it deserves little deference. Moreover, good arguments exist that FLPMA unambiguously vests the BLM with authority to require

Theodore Roosevelt Conservation P'ship, 661 F.3d at 76 (explaining "the words 'unnecessary' and 'undue' are modifiers requiring nouns to give them meaning, and by the plain terms of the statute, that noun in each case must be whatever actions are causing 'degradation'").

³⁰⁵ In a decision issued the same year as FLPMA's enactment, the Supreme Court recognized the interconnection between animal communities and the ecology of public lands in the context of interpreting the scope of Congress's Property Clause authority. *See Kleppe v. New Mexico*, 426 U.S. 529, 535 (1976).

³⁰⁶ *See* Dec. 2018 Modified Memorandum, *supra* note 29; Pidot, *supra* note 29, at 7–8.

compensatory mitigation, even if the agency retains substantial discretion to decide whether, how, and in what circumstances it will exercise that authority.

The BLM has not engaged in notice and comment rulemaking to issue regulations to address compensatory mitigation that would be owed deference under the familiar two-step framework established by the Supreme Court in 1984 in *Chevron, U.S.A. v. National Research Defense Council, Inc.*³⁰⁷ Instead, it expressed its current view disclaiming authority in an instruction memorandum directing BLM employees “not [to] require compensatory mitigation from public land users” and simply asserting that FLPMA “cannot reasonably be read to allow BLM to require mandatory compensatory mitigation for potential temporary or permanent impacts from activities authorized on public lands.”³⁰⁸ The Department of the Interior has made clear that instruction memorandums “do not have the force and effect of law,”³⁰⁹ and they are not issued through the notice-and-comment rulemaking process.³¹⁰ Therefore, the instruction memorandum should not be afforded *Chevron* deference.³¹¹

Nonetheless, a court might defer to the instruction memorandum “proportional to its ‘power to persuade’” under so-called *Skidmore* deference,³¹² taking account of “the thoroughness evident in its consideration, the validity of its

³⁰⁷ 467 U.S. 837, 842 (1984). Nonetheless, because the BLM has explicitly adopted a policy, its disclaimer of authority does not constitute an unreviewable action immunized from judicial review. Cf. Bryan Clark & Amanda C. Leiter, *Regulatory Hide and Seek: What Agencies Can (and Can't) Do to Limit Judicial Review*, 52 B.C. L. REV. 1687, 1691 (2011) (discussing strategies agencies deploy to insulate their decisions from judicial review). Justiciability considerations like standing and ripeness could impede efforts to directly seek judicial review of the instruction memoranda through which BLM announced its disclaimer of authority. The BLM has, however, already taken concrete action based on these memoranda, for example, by amending resource management plans to remove compensatory mitigation obligations. See, e.g., BUREAU OF LAND MGMT., *supra* note 31, at 1-4.

³⁰⁸ See July 2018 Instruction Memorandum, *supra* note 29; Dec. 2018 Modified Memorandum, *supra* note 29. The policies also provide that even if the BLM has authority to require compensatory mitigation, it will not do so. July 2018 Instruction Memorandum, *supra*; Dec. 2018 Modified Memorandum, *supra*.

³⁰⁹ Robert S. Glenn & DeLloyd Cazier, 124 Interior Dec. 104, 109 (IBLA 1992); see *McMaster v. United States*, 731 F.3d 881, 888–89 (9th Cir. 2013) (relying on the IBLA's decision in *Robert S. Glenn & DeLloyd Cazier* to hold that the BLM Manual was not binding).

³¹⁰ Because the Instruction Memorandum was not issued through notice-and-comment rulemaking but nonetheless “is written in binding terms,” it may be entirely invalid. See *W. Watersheds Project v. Zinke*, 336 F. Supp. 3d 1204, 1234 (D. Idaho 2018) (ruling that the instruction memorandum was unlawful).

³¹¹ See *McMaster*, 731 F.3d at 891 (declining to give *Chevron* deference to the Solicitor's Opinion because it lacked the force of law); *S. Utah Wilderness All. v. Bureau of Land Mgmt.*, 425 F.3d 735, 759 (10th Cir. 2005) (declining to afford *Chevron* deference to BLM's interpretation that had “never been adopted by the agency through a formal rule or regulation and do[es] not have the force of law”); *W. Watersheds Project*, 336 F. Supp. 3d at 1236 n.9 (declining to afford *Chevron* deference to instruction memorandum).

³¹² *United States v. Mead Corp.*, 533 U.S. 218, 235 (2001) (quoting *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944)).

reasoning, its consistency with earlier and later pronouncements, and [other] factors.”³¹³ None of those factors weigh in favor of deference here: the instruction memorandum contains scant analysis to bolster its interpretation, what little reasoning it provides is based on an incorrect reading of caselaw, and its ultimate view is inconsistent with long-standing practice.³¹⁴ A court asked today to address the BLM’s authority to require compensatory mitigation under FLPMA would, therefore, find little guidance from the agency and should reject its crabbed view of its statutory authority for the reasons explained in this Article.

Future administrative action could shift the terrain, should the BLM promulgate regulations based on its current view, presenting the question whether FLPMA is unambiguous, and if not, whether the BLM can reasonably construe the statute as prohibiting compensatory mitigation. This is a decidedly harder question, as the statutory text does not expressly address compensatory mitigation.³¹⁵ Nonetheless, as this Part has demonstrated, the text, structure, and history of the statute provide compelling evidence that compensatory mitigation is plainly authorized.³¹⁶

The Anti-Degradation Mandate would appear the strongest source of authority. It charges the BLM with taking “any action” to prevent prohibited degradation,³¹⁷ and although that phrase is not precise, it is unmistakably broad. Few words would appear to encompass broader authority than those that Congress chose. As a result, the BLM would be hard pressed to provide a satisfactory explanation as to why compensatory mitigation is not authorized by the Anti-Degradation Mandate.

The Land Use Planning Mandate should also be viewed as unambiguously authorizing compensatory mitigation, at least as a component of RMPs. Land use planning encompasses compensatory mitigation through the instrument of exactions. It did so in 1976, and it does so today. In the absence of textual signals to the contrary, none of which exist, FLPMA should be read to vest the BLM with authority to use familiar and traditional planning tools.

³¹³ *Skidmore*, 323 U.S. at 140.

³¹⁴ See *Pidot*, *supra* note 29, at 11–18.

³¹⁵ In addition to the hurdles imposed by *Chevron* deference, the BLM would have to adequately explain its change in position. As Professor Bill Buzbee has explained, simply identifying ambiguity is often insufficient to sustain a dramatic change in agency position because “[b]road claims of policy change power also tend to downplay the regulatory centrality of science, data, other empirical observations and predictions about the world, and linked agency explanations.” William W. Buzbee, *The Tethered President: Consistency and Contingency in Administrative Law*, 98 B.U. L. REV. 1349, 1360 (2018).

³¹⁶ See *supra* Part III.B-D.

³¹⁷ 43 U.S.C. § 1732(b).

The Multiple Use Mandate presents, perhaps, the closest question. The BLM must manage public lands under its principles, but those principles do not clearly address the terms and conditions that the BLM may incorporate into land use authorizations. Courts have, however, often accepted arguments made by the United States that the Multiple Use Mandate imbues the BLM with broad discretion and authority over public lands and land use authorizations.³¹⁸ Where the BLM has successfully invoked the breadth of its authority to defend itself in lawsuits seeking to compel it to manage public lands in a particular fashion, the agency should not be able to disclaim authority under a narrow reading of the statute.

IV. EFFICACY OF COMPENSATORY MITIGATION ON PUBLIC LANDS

Even if the BLM has ample authority to require compensatory mitigation, should it? In short, sometimes. Done well, compensatory mitigation can broker compromise, enhance efficiency, and ensure that future generations inherit healthy and vibrant public lands. Done poorly, it can deliver an empty promise of environmental protection that wastes resources on futile conservation efforts or, worse yet, serves as justification for the destruction of unique and irreplaceable resources. This Part identifies four considerations to guide compensatory mitigation requirements on public lands.³¹⁹

Before articulating those considerations, consider the potential benefits that compensatory mitigation offers, if designed carefully and deployed in appropriate circumstances. First, compensatory mitigation creates flexibility for land managers, expanding the universe of possible decisions beyond a binary choice to either authorize an activity or forbid it.³²⁰ In its absence, the BLM faces a constrained set of options. On the one hand, it can authorize an activity and allow harms to the environment and other resource users to occur, satisfying the demand of the party seeking the authorization and allied interests. On the other, it can prohibit the activity, frustrate the interests of a project proponent, and forgo the public benefits a project would produce, but preserve con-

³¹⁸ See *Or. Nat. Desert Ass'n v. Bureau of Land Mgmt.*, 625 F.3d 1092, 1114 (9th Cir. 2010) (“[T]he BLM’s wide authority to ‘manage the public lands under principles of multiple use and sustained yield’ . . . allows it ample discretion for management of lands with wilderness values.”); *Theodore Roosevelt Conservation P’ship*, 616 F.3d at 518 (“[BLM] has wide discretion to determine how those [multiple use] principles should be applied.”); see also *Strickland*, 519 F.2d at 469 (multiple use management under the Classification and Multiple Use Act of 1964 “breathe[s] discretion at every pore”).

³¹⁹ See *infra* notes 320–391 and accompanying text.

³²⁰ See *Baker et al.*, *supra* note 35, at 10,333 (describing mitigation programs as injecting flexibility into rigid regulatory regimes); *Owen*, *supra* note 22, at 271 (“[B]y replacing flat prohibitions with the possibility of deal-making, compensatory mitigation appears to give flexibility to regulated entities.”).

ditions on the lands that meet the needs of other interests. Compensatory mitigation enables decisions that meet a broader range of social needs, advancing core values of the Multiple Use Mandate.³²¹

Second, and relatedly, compensatory mitigation brokers compromise. In the short term, it can reduce public opposition to specific resource development projects, by linking development to the implementation of conservation activities.³²² Over the longer term, compensatory mitigation can facilitate collaboration among disparate interests in public lands, building trust and understanding that can inspire innovation and build partnerships across historic divides.³²³ In an era in which public land disputes have sparked heated protest and even armed resistance,³²⁴ the ability of compensatory mitigation to provide opportunities to build common ground is an independent benefit of the tool.

Third, compensatory mitigation, if carefully planned and coordinated across ecosystems, can lead to better environmental outcomes, by directing resources to conservation activities where they are most needed.³²⁵ All ecosystems experience the effects of human activities, a dynamic that will only accelerate with climate change.³²⁶ Coupling compensatory mitigation with effective land use planning can channel intensive land uses into areas of less ecological importance and create financial resources for the restoration and protection of more vital areas.

³²¹ See Gregory S. Braker et al., *Environmental Mitigation in Mining: Unique Challenges and Opportunities*, 27 NAT. RESOURCES & ENV'T 25, 27 (2013) (arguing in favor of broader compensatory mitigation requirements in lieu of avoidance and minimization efforts because "[v]aluable minerals should be efficiently extracted, not left in the ground").

³²² See *id.* at 25 ("For surface mining permit applicants, the task is to formulate a plan to maximize the recovery of minable resources while minimizing adverse impacts to environmental resources to a level that is acceptable to regulators and, ideally, to local and environmental groups.").

³²³ This may sound Panglossian, but in some contexts compensatory mitigation has already brought together the business and environmental community. For example, the Nature Conservancy has developed a forecasting methodology to facilitate trading of conservation credits in sagebrush country. See Roger Moellendorf & Brian Bahouth, *A Look at the Nature Conservancy's Landscape Conservation Forecasting Program*, NEV. CAP. NEWS (Feb. 7, 2019), <https://nevadacapitalnews.org/2019/02/07/a-look-at-the-nature-conservancys-landscape-conservation-forecasting-program/> [<https://perma.cc/H22B-EZT6>]. A large mining company relied upon the methodology in entering a conservation agreement with the Department of the Interior. See *Protecting Sagebrush Ecosystems: Working with Barrick to Protecting Sagebrush Seas*, NATURE CONSERVANCY, <https://www.nature.org/en-us/about-us/where-we-work/united-states/nevada/stories-in-nevada/barrick-gold-corporation-and-the-nature-conservancy> [<https://perma.cc/8UGG-8M6J>]; see also Pidot, *supra* note 27, at 191.

³²⁴ See Kirk Johnson, *Siege Has Ended, but Battle Over Public Lands Rages on*, N.Y. TIMES (Apr. 14, 2017), <https://www.nytimes.com/2017/04/14/us/public-lands-bundy-malheur-national-wildlife-refuge.html> [<https://perma.cc/6TUI-8S4D>].

³²⁵ See Robert L. Glicksman, *Regulatory Safeguards for Accountable Ecosystem Service Markets in Wetlands Development*, 62 U. KAN. L. REV. 943, 943 (2014).

³²⁶ See, e.g., Sandra Zellmer, *Wilderness, Water, and Climate Change*, 42 ENVTL. L. 313, 325–32 (2012) (discussing the threat posed by climate change to naturalness and wildness of wilderness areas).

Fourth, compensatory mitigation can improve economic efficiency. In its absence, the environmental harm caused by resource development remains an economic externality, leading to overproduction.³²⁷ Compensatory mitigation serves as a market corrective, forcing resource users to internalize the full costs—or at least a fuller accounting of the costs—associated with their activities, including both purely ecological harms and economic losses resulting from diminished ecosystem services.³²⁸ Moreover, deployed effectively, compensatory mitigation recognizes that healthy ecosystems on public lands themselves produce economic value, and that environmental protection may enhance, rather than impede, the economic value of these lands.³²⁹

Fifth, compensatory mitigation creates a price signal that can spur investment in new technologies and techniques that enable resource use with fewer environmental impacts.³³⁰ To the extent that compensatory mitigation encompasses credit trading schemes, it can also serve to direct conservation resources to those locations where benefits can be obtained at the lowest cost.³³¹ In turn, the business opportunities presented by compensatory mitigation have the potential to create new constituencies for environmental protection. This will occur if, for example, tradeable credit systems are developed, as has occurred in the wetland mitigation program, where private for-profit business enterprises create wetlands mitigation banks to produce and sell credits generated by preserving, restoring, or enhancing wetlands.³³² Transforming environmental protection into an opportunity for private entrepreneurship offers advantages, including by harnessing a substantial flow of capital—the investment of just a single private equity firm exceeded \$300 million in capital commitments in 2016.³³³ Privatizing mitigation may also provide an array of benefits often promised by market-based solutions, impelling innovation and enhancing efficiency. At the same time, privatization raises concerns about accountability, transparency, and public participation, and the interests of the

³²⁷ See Hein, *supra* note 69, at 19.

³²⁸ See Ruhl et al., *supra* note 77, at 256 (noting that, in the absence of government intervention, “a landowner’s decision about whether to convert wetlands to other uses is unlikely to take into account their service value to others”). Professors J.B. Ruhl and Jim Salzman and their collaborator Iris Goodman note that wetlands mitigation historically “was primarily biocentric in focus” and neglected ecosystem services, but that accounting for ecoservices can comfortably fit within compensatory mitigation. *Id.* at 255.

³²⁹ See, e.g., Glicksman, *supra* note 325, at 947–48. See generally James Salzman et al., *Protecting Ecosystem Services: Science, Economics, and Law*, 20 STAN. ENVTL. L.J. 309 (2001).

³³⁰ See Spanjer, *supra* note 23, at 382–87.

³³¹ Braker et al., *supra* note 321, at 27–28 (“[C]ompared with well-planned watershed and ecoregion based mitigation, onsite avoidance and minimization may offer fewer ecological benefits to the relevant ecological units . . .”).

³³² See Owley, *supra* note 23, at 1110.

³³³ See Spanjer, *supra* note 23, at 374.

political constituency it creates in profitability may impede effective regulation to ensure the long-term success of mitigation projects.³³⁴

Sixth, to the extent that compensatory mitigation requirements are embedded in land use plans, agency guidance, or regulations, they enhance business certainty by providing clarity about the measures a resource user must implement to address environmental impacts.³³⁵ Although the BLM can, of course, always revise (or entirely abandon) such decisions, they have greater durability than other land use decisions because they draw support from across the spectrum of interests, as evidenced by a letter signed by an extraordinarily broad array of interests in Wyoming—representing oil and gas, mining, ranching, farming, and environmentalists—urging the Trump Administration to leave sage-grouse conservation efforts embedded in RMPs largely intact.³³⁶

Those are attractive benefits. Yet they will only result from well-designed, appropriate compensatory mitigation requirements. The remainder of this Part identifies four considerations that should guide assessment of whether and how compensatory mitigation should be required in a particular context.³³⁷

A. Recognizing Limitations

Some harms cannot be offset or cannot be offset effectively. Where a use of public lands involves such harms, purporting to require compensatory mitigation that is destined to fail may erode public trust, alienate resource users, and conceal from public scrutiny the very real and potentially irreversible effects of a resource use, serving as a false justification for authorizing the activity.³³⁸ Compensatory mitigation should not be relied upon in such circumstances.

This dark side to compensatory mitigation may occur because a resource is unique.³³⁹ Sacred lands provide a quintessential example. Take, for example,

³³⁴ See Glicksman, *supra* note 325, at 960–93; Owley, *supra* note 23, at 1118–23.

³³⁵ See Burger, *supra* note 10, at 340; Pidot, *supra* note 27, at 180–83.

³³⁶ See Letter from Paul Ulrich, Petroleum Ass'n of Wyo. et al., to Erica Husse, Bureau of Land Mgmt. (Nov. 3, 2017), https://www.eenews.net/assets/2017/12/01/document_gw_03.pdf [<https://perma.cc/K297-Z3KL>]; see also Scott Streater, *Sage Grouse: Wyo. Industry, Conservation Groups See Hope in Federal Plans*, GREENWIRE (Dec. 1, 2017), <https://bit.ly/2vXm08z> [<https://perma.cc/U6WB-BPXW>].

³³⁷ See *infra* notes 338–391 and accompanying text.

³³⁸ This risk amounts to the potential that compensatory mitigation could be deployed to “greenwash” projects, rather than provide meaningful environmental benefits. See Miriam A. Cherry, *The Law and Economics of Corporate Social Responsibility and Greenwashing*, 14 U.C. DAVIS BUS. L.J. 281, 286 (2014) (describing “greenwashing as a type of distraction, or diversionary tactic”).

³³⁹ To some extent, nature can always be viewed as unique. Every hill and vale has its own individual characteristics and every individual animal its own history, genetic composition, and desires. See David Takacs, *Are Koalas Fungible? Biodiversity Offsetting and the Law*, 26 N.Y.U. ENVTL. L.J. 161, 165 (2018). To draw on an example offered by Professor David Takacs, a system for offsetting

the four sacred peaks of the Navajo. As Professor Kristen Carpenter explains, “[f]rom the time of their creation, the Navajo people have had a spiritual obligation to stay within their homeland, care for it, and revere their sacred mountains. Accordingly, the Peaks are greeted with daily prayer songs referencing the mountain as ‘mother’ and ‘leader.’”³⁴⁰ The harm caused by allowing mining of these peaks could not be offset by restoring other nearby mountains. Development that will destroy the only remaining habitat for an endangered species—a project, for example, that would destroy Devil’s Hole, the only known location of a species of desert pup fish—would similarly not be susceptible to compensation.³⁴¹

Other resources are difficult, but not conceptually impossible, to recreate, and to the extent we lack the technical capacity to effectively offset such harms, compensatory mitigation will fail. To sort among resources for which compensatory mitigation is appropriate and those for which it is not, requires careful, clear-eyed analysis of the environmental attributes at stake at a project site and a similarly careful evaluation of available technology. For example, a scientific review of the wetlands mitigation program found that efforts to create or restore certain types of wetlands—fens and bogs, for example—generally fail.³⁴² Because tools do not currently exist to recreate the complex ecological interactions that make them up, a decision authorizing the destruction of a fen or bog will result in a loss of those ecosystems and the services they provide. Decisionmakers should not conceal the consequences of their decisions though the artifice of sham mitigation projects.

Gaps in scientific knowledge—both theoretical and applied—also create limits on what compensatory mitigation can accomplish. Some biological systems and ecological interactions have been extensively studied, creating opportunities for better calibrated, more successful efforts to offset impacts. For example, loss of milkweed has contributed to the decline of monarch butterflies, and increasing the numbers of those plants in areas frequented by the butterfly constitutes an important component of conservation efforts.³⁴³ Protocols have

harms to biodiversity offers no succor for “koalas peaceably munching eucalyptus leaves” who will have their habitat destroyed, and possibly lives ended, by a pipeline project. *Id.* Even in the absence of perfect substitution, however, mitigation may meaningfully compensate for certain losses, but not others, depending upon what values adhere to the resources harmed.

³⁴⁰ Kristen A. Carpenter, *Real Property and Personhood*, 27 STAN. ENVTL. L.J. 313, 352 (2008).

³⁴¹ See *Cappaert v. United States*, 426 U.S. 128, 132 (1976) (affirming an injunction to protect Devil’s Hole and finding federal reserved water rights for pupfish conservation).

³⁴² This observation mirrors the experience in the wetlands mitigation context, where the National Resource Council identified “wetlands that are difficult or impossible to restore, such as fens or bogs.” NAT’L RESEARCH COUNCIL, *supra* note 20, at 7.

³⁴³ See Thomas D. Landis & R. Kasten Dumroese, *Propagating Native Milkweeds for Restoring Monarch Butterfly Habitat*, in INT’L PLANT PROPAGATORS’ SOC’Y, COMBINED PROCEEDINGS 299, 299 (2014) (“[G]rowing and outplanting milkweeds is a simple and easy way to assist this beloved

been developed for propagating numerous native milkweed species.³⁴⁴ The U.S. Forest Service already engages in extensive efforts to spread milkweed across hundreds of thousands of acres of national forest,³⁴⁵ and similar efforts could be deployed to offset activities in areas of public lands rich in those plants.³⁴⁶ Less knowledge exists about other habitats, ecological systems, and biological interconnections.³⁴⁷ For example, little is known about threats to the Palouse giant earthworm, or even its distribution in the wild, which has been rarely seen.³⁴⁸ Developing effective compensatory mitigation for a little understood species, who may not even exist in a project area, would be difficult. Merely attempting to conduct a survey for the worm in a project area could be expensive and time consuming. Where such costs dwarf the uncertain benefits produced by a project at the edge of science, compensatory mitigation may not be appropriate.

Moreover, uncertainty will also exist about more practical aspects of a project. Sometimes it is difficult to predict how an authorized activity will affect the environment within which it occurs. This could result from a lack of experience with newer technologies or deployment of an old technology in a new setting. Researchers have decades of experience studying the impacts of oil and gas development in public lands, while deployment of utility-scale wind and solar energy generation facilities is a much more recent occurrence with less information available about impacts.³⁴⁹ Land managers may also have an incomplete understanding of the resources present at a project site. The result of such uncertainty played out in public view after the BLM ap-

butterfly.”); see also Stanley Z. Guffy et al., *Management of Isolated Populations: Southern Strain Brook Trout*, in *ECOSYSTEM MANAGEMENT FOR SUSTAINABILITY: PRINCIPLES AND PRACTICES ILLUSTRATED BY A REGIONAL BIOSPHERE RESERVE COOPERATIVE* 247, 248 (John D. Peine ed., 1998) (describing extensive research about brook trout habitat in the southern Appalachian mountains and the causes of their decline).

³⁴⁴ See Landis & Dumroese, *supra* note 343, at 300.

³⁴⁵ Priya C. Shahani et al., *Monarch Habitat Conservation Across North America: Past Progress and Future Needs*, in *MONARCHS IN A CHANGING WORLD: BIOLOGY AND CONSERVATION OF AN ICONIC BUTTERFLY* 31, 37 (Karen S. Oberhauser et al. eds., 2015).

³⁴⁶ *Id.*

³⁴⁷ See, e.g., Morris & Owley, *supra* note 16, at 383 (“One of the critical problems with developing mitigation . . . in the California desert is that, compared to many other areas, there is relatively little understanding of where species may be located and how desert ecosystems function.”).

³⁴⁸ See Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to List the Giant Palouse Earthworm (*Drilolerius americanus*) as Threatened or Endangered, 76 Fed. Reg. 44,547, 44,549–51 (Dep’t of the Interior July 26, 2011) (listing 10 instances of confirmed identification of species); Ryan P. Kelly et al., *Science, Policy, and Data-Driven Decisions in a Data Vacuum*, 44 *ECOLOGY L.Q.* 7, 21–22 (2017).

³⁴⁹ See WYO. GAME & FISH DEP’T, 2017 STATE WILDLIFE ACTION PLAN, at II-2-6 (2017) (“For . . . species of wildlife that inhabit open landscapes, such as pronghorn and sage-grouse, the behavior and resulting population responses to wind energy development are currently unknown but being studied.”).

proved the Ivanpah Solar Project and it became apparent that far more desert tortoises lived at the project site than had been estimated.³⁵⁰

Recognizing that some resources are unique, others are difficult to replicate, and that there is uncertainty inherent in any conservation effort does not undermine the benefits that can flow from compensatory mitigation. Land managers always make decisions based on imperfect information, and compensatory mitigation is no different.³⁵¹ Moreover, these dynamics do not mean that land managers should always eschew experimentation with innovative but unproven techniques,³⁵² or attempt to develop new scientific information about the ecological systems on public lands as a component of compensatory mitigation.³⁵³ Experiments have value. They produce knowledge that can result in new, better methods of environmental restoration.³⁵⁴ Yet, when public land managers pursue compensatory mitigation at the outer boundary of current knowledge and technical capacity, it is incumbent upon them to do so candidly so that the party tasked with implementing compensatory mitigation and the public understand the risks.

B. Accounting for Differences

Even among environmental impacts that are amenable to offsetting, substantial differences exist that require variation in the design of compensatory mitigation. This is particularly so because the public lands contain a diverse array of values and uses, meaning that compensatory mitigation on public lands could be far broader than the wetlands mitigation and habitat mitigation programs, each of which address a single (if complicated) environmental harm.³⁵⁵ The BLM must carefully account for these differences and should not blindly deploy a mitigation scheme developed in one context in another.

The most important difference among potential compensatory mitigation activities is the complexity of the harm at issue. Many environmental problems

³⁵⁰ See Morris & Owley, *supra* note 16, at 383; Ken Wells, *Tortoises Manhandled for Solar Splits Environmentalists*, BLOOMBERG (Sept. 20, 2012), <https://www.bloomberg.com/news/articles/2012-09-20/tortoises-manhandled-for-solar-splits-environmentalists> [<https://perma.cc/58V9-TNLL>].

³⁵¹ See Justin R. Pidot, *Governance and Uncertainty*, 37 CARDOZO L. REV. 113, 125–26 (2015) (discussing uncertainty in natural resources decision making).

³⁵² See Holly Doremus, *Adaptive Management as an Information Problem*, 89 N.C. L. REV. 1455, 1464 (2011) (describing “adaptive management” as including “iterative decisionmaking and a commitment to learning over time”).

³⁵³ See Pidot, *supra* note 27, at 192 (describing “pilot programs” as a component of public-private conservation agreement).

³⁵⁴ Pidot, *supra* note 351, at 160–61 (discussing knowledge produced through adaptive management).

³⁵⁵ See *supra* notes 75–84 and accompanying text.

involve complex, far-flung interactions.³⁵⁶ Complex harms will need complex solutions, often requiring extensive planning to coordinate both authorized uses and mitigation efforts across landscapes.³⁵⁷

Conservation of the greater sage-grouse is a paradigmatic example. A host of factors contribute to the decline of the species—development of habitat, increased wildfire, spread of invasive plant species, intensive grazing—and these threats occur throughout hundreds of thousands of acres of sagebrush steppe in the western United States, more than half of which occur on public lands and national forests.³⁵⁸ It is difficult to measure the adverse impact of any one land use, in isolation, and piecemeal compensatory mitigation efforts designed on a project-by-project basis may be poorly calibrated to successfully offset impacts to the bird.³⁵⁹ Rather, planning and coordination across federal lands will lead to more successful, less costly, and more predictable conservation efforts, and as the lengthy, resource-intensive process for developing the greater sage-grouse conservation plans demonstrates, this requires sustained attention, considerable investment, and collaboration by federal land managers, state wildlife agencies, and businesses.³⁶⁰ Although the BLM has engaged in this type of planning in a few instances, like the greater sage-grouse conservation plans and the Desert Renewable Energy Conservation Plan, it has often implemented compensatory mitigation in an ad hoc fashion without sufficient regard for the manner by which land uses fit into the ecological systems within which they occur.³⁶¹

³⁵⁶ See Braker et al., *supra* note 321, at 27 (“When considering [wetlands] mitigation for mining, it is important to keep in mind that the policy and scientific underpinning of CWA mitigation is to improve water quality through a regional watershed approach.”).

³⁵⁷ For a discussion of the role of state-based planning efforts to guide habitat and wetlands mitigation, see Jessica B. Wilkinson & Robert Bendick, *The Next Generation of Mitigation: Advancing Conservation Through Landscape-Level Mitigation Planning*, 40 ENVTL. L. REP. 10,023, 10,025–28 (2010).

³⁵⁸ See Greater Sage-Grouse Finding, *supra* note 26, at 59,866.

³⁵⁹ Similarly, because wetlands play innumerable ecological roles, research has found substantial flaws in project-by-project wetlands mitigation.

³⁶⁰ Although the Department of the Interior has withdrawn the prior administration’s landscape mitigation policy, U.S. DEP’T OF THE INTERIOR, *supra* note 105, some states support implementing compensatory mitigation across landscapes, including in traditionally conservative western states like Wyoming. See WYO. GAME & FISH DEP’T, RECOMMENDATIONS FOR DEVELOPMENT OF OIL AND GAS RESOURCES WITHIN IMPORTANT WILDLIFE HABITATS 7 (2010), <https://www.nrc.gov/docs/ML1108/ML110810642.pdf> [<https://perma.cc/YJ3S-SCRY>] (“A landscape approach is essential to plan and mitigate large-scale energy developments because impacts from such developments are not limited to the actual project area, nor are mitigation opportunities.”).

³⁶¹ For many years, the wetlands mitigation program similarly relied on individual mitigation projects undertaken by permit recipients. These atomized efforts have been widely criticized as “poorly designed, inadequately implemented, and infrequently monitored.” Ruhl et al., *supra* note 77, at 254; see NAT’L RESEARCH COUNCIL, *supra* note 20, at 6–8; U.S. GOV’T ACCOUNTABILITY OFFICE,

Other harms may lend themselves to simpler solutions developed for a specific proposed land use. Consider two examples. Desert bighorn sheep in and around the Kofa National Wildlife Refuge of Arizona experienced a precipitous decline between 2006 and 2010, attributed largely to a prolonged drought in the area.³⁶² Had a company sought permission to build a mine near the refuge that would disrupt or destroy a watering hole for the sheep, simple techniques could be used to construct an alternate water source nearby.³⁶³ Of similar simplicity were impacts to lands with wilderness characteristics caused by construction of high-voltage transmission lines as part of the TransWest Express project.³⁶⁴ Lands with wilderness characteristics must include at least 5,000 acres of contiguous, undeveloped lands.³⁶⁵ To offset harms to wilderness characteristics, the BLM required the project sponsor to “acquire[] inholdings (either via conservation easement or fee-simple ownership) from willing sellers in designated wilderness (first priority) or wilderness study areas (second priority) or lands managed to protect wilderness characteristics under a[] [resource management plan] (third priority) within the states with units impacted by the Project.”³⁶⁶ These types of compensatory mitigation efforts do not require extensive coordination and planning to succeed. Establishing mitigation goals at a broader scale would still provide benefits, by enhancing predictability and consistency, but the BLM has limited resources to engage in such efforts, and the inability to do so for impacts that can effectively be offset on a project-by-project basis should not obstruct development of project-specific requirements.

Finally, effective compensatory mitigation requires attention to the nuances of the affected ecological processes. Not every acre of sage brush steppe, mountain vale, or desert is the same.³⁶⁷ Because compensatory mitigation requires measuring harms and offsetting benefits, it can lend itself to rote quantification—for example, assessing mitigation purely by counting the acreage

WETLANDS PROTECTION: CORPS OF ENGINEERS DOES NOT HAVE AN EFFECTIVE OVERSIGHT APPROACH TO ENSURE THAT COMPENSATORY MITIGATION IS OCCURRING 5–6 (2005).

³⁶² See *Wilderness Watch, Inc. v. U.S. Fish & Wildlife Serv.*, 629 F.3d 1024, 1028–29 (9th Cir. 2010).

³⁶³ The U.S. Fish and Wildlife Service created two such water sources that became the source of litigation because they occurred within designated wilderness. *Id.*

³⁶⁴ See *TRANSWEST EXPRESS ROD*, *supra* note 118, at 1.

³⁶⁵ See 43 U.S.C. § 1782(a) (2018); *Or. Nat. Desert Ass’n v. Bureau of Land Mgmt.*, 625 F.3d 1092, 1111–12 (9th Cir. 2010) (holding that the BLM has the obligation to inventory and consider lands with wilderness characteristics outside of designated wilderness study areas).

³⁶⁶ *TRANSWEST EXPRESS APPENDIX*, *supra* note 118, at F-21.

³⁶⁷ See Albert C. Lin, *Myths of Environmental Law*, 2015 UTAH L. REV. 45, 50 (“Wetlands mitigation schemes assume that wetlands are fungible, yet ecological complexity calls into question this assumption.”).

degraded and improved.³⁶⁸ Substantial incentives may favor simplistic quantification, because it takes time and resources to complete the subtle and complex analysis of truly accounting for ecological functions.³⁶⁹ Yet failing to recognize these differences, or taking a blinkered view to the harms threatened by an activity, could cause compensatory mitigation to obscure environmental harms, rather than serve as a corrective for them, creating the appearance on paper that the environment will be protected while resulting in significant harm in reality. This has occurred in the wetlands mitigation program, which largely adopted a simplistic quantification approach for many years, and was widely criticized for it.³⁷⁰ Regulatory changes in 2008 adopted a more qualitative approach focused on assessing and replacing ecosystem function, rather than raw acreage.³⁷¹ Even under the new regulations, wetlands mitigation efforts have failed to account for all of the roles that wetlands play—such as flood protection and groundwater recharge—leading to neglect of urban wetlands, which often provide those services but have less value as habitat.³⁷² The BLM would be wise to heed this lesson else its compensatory mitigation efforts will face scathing scrutiny from the public and scientific community.³⁷³

C. Assuring Long-Term Implementation

Development on public lands will often permanently reshape the environment, causing impacts that stretch well into the future.³⁷⁴ Meaningful com-

³⁶⁸ Cf. Cynthia R. Harris & James M. McElfish, Jr., *Natural Resource Damages, Mitigation Banking, and the Watershed Approach*, 48 ENVTL. L. REP. 11,001, 11,019 (2018) (explaining that for natural resource damages, a “restoration project must address both the type/kind and the scale of ecological services lost”).

³⁶⁹ See Salzman & Ruhl, *supra* note 76, at 665 (“Because of . . . agency and participant incentives . . . simple currencies [for wetlands and habitat mitigation] have driven out complex ones.”).

³⁷⁰ See NAT’L RESEARCH COUNCIL, *supra* note 20, at 3.

³⁷¹ See 33 C.F.R. § 332.3(c)(2)(i) (2019) (“A watershed approach to compensatory mitigation considers the importance of landscape position and resource type of compensatory mitigation projects for the sustainability of aquatic resource functions within the watershed.”); Kathryn Campbell et al., *Dialogue: The State of Compensatory Mitigation*, 47 ENVTL. L. REP. 10,817, 10,818 (2017) (describing regulatory changes in 2008 as involving “a much more qualitative analysis, looking at replacing the function and value of that water in a watershed on a much bigger scale”).

³⁷² See Ruhl et al., *supra* note 77, at 259 (“Biomass productivity and habitat quality may or may not be proxies for services such as storm water mitigation, groundwater recharge, and thermal regulation.”).

³⁷³ See Spanjer, *supra* note 23, at 389.

³⁷⁴ Many resource users have a formal obligation to reclaim the lands they use after their activities have ended. See, e.g., Jedediah Purdy, *The Long Environmental Justice Movement*, 44 ECOLOGY L.Q. 809, 850 (2018) (“The Surface Mining Control and Reclamation Act of 1977 . . . required that mining sites be restored to their ‘approximate original contour[s].’” (quoting 30 U.S.C. § 1265(b)(3) (2018))). But see Jan G. Laitos & Christopher Ainscough, *The Paralysis Paradox and the Untapped Role of Science in Solving “Big” Environmental Problems*, 30 GEO. ENVTL. L. REV. 409, 412 (2018) (explaining that the 1872 Mining Law “fails to include provisions requiring miners to consider the environ-

pensation for such impacts must occur across a concomitant timescale, requiring ongoing monitoring, adaptation, and enforcement.³⁷⁵

Even well-designed compensatory mitigation can fail at its inception, because resource users do not live up to their obligations through neglect or fraud.³⁷⁶ The first phase of conservation efforts—say removing an invasive plant and establishing native vegetation—can require sustained efforts over the course of years. In a 2001 report, the National Research Council found that “[u]p to 20 years may be needed for some wetland restoration or creation sites to achieve functional goals.”³⁷⁷ After that, restoration efforts can falter because, say, invasive plants reestablish themselves, requiring an ongoing investment of time and resources. The need for ongoing monitoring will be clear for many compensatory mitigation efforts, yet a 2005 Government Accountability Office report found that only about half of those required to engage in wetlands mitigation as a condition of securing a permit from the Army Corps of Engineers were required to engage in any monitoring whatsoever, and even if such an obligation existed, less than a quarter of those subject to it complied.³⁷⁸

Moreover, implementation is not by itself enough, because a well-designed mitigation project can confront unforeseen or changing circumstances that impair its effectiveness.³⁷⁹ Contingency or adaptive management provisions can

mental consequences of hardrock mining, or to perform any environmental remediation or reclamation after the mine is closed”). Yet reclamation efforts often fail and rarely restore ecosystem functions even approximating those that were lost. *See* U.S. GOV’T ACCOUNTABILITY OFFICE, COAL MINE RECLAMATION: FEDERAL AND STATE AGENCIES FACE CHALLENGES IN MANAGING BILLIONS IN FINANCIAL ASSURANCES 13–14 (2018); V. Sheoran et al., *Soil Reclamation of Abandoned Mine Land by Revegetation: A Review*, 3 INT’L J. SOIL, SEDIMENT & WATER 1, 14–15 (2010) (discussing methodology to evaluate effectiveness of soil reclamation).

³⁷⁵ *See* Glicksman, *supra* note 325, at 956–69 (identifying accountability mechanisms needed to ensure the effectiveness of wetlands mitigation banks, including financial safeguards, verifiable performance standards, public transparency and participation, and effective enforcement); Sherry Teresa, *Perpetual Stewardship Considerations for Compensatory Mitigation and Mitigation Banks*, 38 STETSON L. REV. 337, 340 (2009) (“Merely setting the land aside, however, is not sufficient to protect native resources. Active long-term stewardship is needed.”).

³⁷⁶ *See* Glicksman, *supra* note 325, at 952 (noting that wetlands mitigation has a similar risk of fraud as tradeable pollution permits); *see also id.* at 955 (“Because markets in environmental amenities, like all markets, are subject to manipulation, market-based programs must be designed carefully.”).

³⁷⁷ NAT’L RESEARCH COUNCIL, *supra* note 20, at 6.

³⁷⁸ U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 361, at 5.

³⁷⁹ *See, e.g.*, NAT’L RESEARCH COUNCIL, *supra* note 20, at 8 (recommending that wetlands mitigation projects receive long-term stewardship); Royal C. Gardner et al., *Compensating for Wetland Losses Under the Clean Water Act (Redux): Evaluating the Federal Compensatory Mitigation Regulation*, 38 STETSON L. REV. 213, 241 (2009) (“The ability to take corrective actions at a particular compensatory mitigation site is intrinsically related to effective monitoring . . .”).

ameliorate this concern,³⁸⁰ but designing and implementing provisions accounting for dynamic change also requires further investment of resources by public land managers and the resource users carrying out conservation activities.³⁸¹

The extent to which compensatory mitigation must include monitoring, maintenance, and adaptability to achieve success will depend on the nature of the project at issue and the harms subject to offset. As discussed above, creating a replacement water source for desert bighorn sheep or removing fencing to provide an alternative migratory pathway for pronghorn antelope may be technically simple and speedy, and require relatively little ongoing oversight. Restoring native plants in habitat occupied by invasive species, on the other hand, may require repeated efforts over many years.

Compensatory mitigation often requires long-term monitoring and adaptation to succeed. It also requires enforcement in the eventuality that a project sponsor has shirked her obligations. Enforcement presents a thorny problem. In other environmental law contexts, citizen groups can supplement federal enforcement resources by suing those that violate legal requirements.³⁸² Public land law in general, and FLPMA in particular, does not include similar citizen suit provisions, limiting the ability of the environmental community and the public to compel compliance with compensatory mitigation. Litigation can occur to challenge land management decisions under the National Environmental Policy Act, but it too cannot enforce mitigation measures after projects have been approved.³⁸³ As a result, enforcement lies in the hands of the federal government, which may lack the resources or appetite to bring such suits.³⁸⁴

D. Pursuing Fairness, Consistency, and Predictability

Fairness also matters.³⁸⁵ Even where resource users lack a legal entitlement to engage in land uses, reasonable expectations exist about what will be required of them to undertake a desired land use.³⁸⁶ Compensatory mitigation

³⁸⁰ See Pidot, *supra* note 351, at 151–72.

³⁸¹ See Glicksman, *supra* note 325, at 958.

³⁸² See Courtney R. McVean & Justin R. Pidot, *Environmental Settlements and Administrative Law*, 39 HARV. ENVTL. L. REV. 191, 197–98 (2015) (discussing citizen suit provisions).

³⁸³ See, e.g., *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989).

³⁸⁴ See U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 361, at 5–6 (finding that the Army Corps of Engineers rarely pursues enforcement actions to enforce compensatory mitigation requirements included in permits).

³⁸⁵ See, e.g., Peter H. Huang, *Reasons Within Passions: Emotions and Intentions in Property Rights Bargaining*, 79 OR. L. REV. 435, 442 (2000) (“There is experimental evidence that many people prefer fair or equitable outcomes because they care about not just absolute payoffs, but also relative payoffs and get angry if relative payoffs differ too much.”).

³⁸⁶ See, e.g., Hillary M. Hoffman, *A Changing of the Cattle Guard: The Bureau of Land Management's New Approach to Grazing Qualifications*, 24 J. ENVTL. L. & LITIG. 243, 246 (2009) (explaining that despite applicable law, “the BLM . . . ha[s] consistently promulgated regulations that, for

has not, however, attended to fairness. As former Interior Deputy Secretary David Hayes explained:

While systems are in place to measure and address wetlands and some endangered species impacts, other types of environmental impacts are dealt with on an ad hoc basis, or not at all. The result is that mitigation often is piecemealed, with project proponents responding to a set of varied and unpredictable requests from agencies that may or may not generate meaningful environmental benefits.³⁸⁷

The expectations of resource users need not dominate evaluation of whether and to what extent compensatory mitigation is appropriate in a specific context. Perceptions of fair treatment are important, however, and the BLM should strive to treat similarly situated parties similarly. Failing to do so will generate public opposition and recalcitrance.³⁸⁸ Because compensatory mitigation often requires the long-term cooperation of resource users, perceptions of unfair treatment may substantially impair the efficacy of projects and the political appetite for this management tool.

Consistency and predictability also produce concrete economic benefits by enhancing certainty for the business community.³⁸⁹ This both pays direct dividends for the economy and local communities that rely on public lands resources and can also transform interest groups who typically oppose more stringent environmental protection into supporters of compensatory mitigation. For example, former Wyoming Governor Matt Meade strenuously defended the greater sage-grouse conservation plans because “[m]ineral companies need long-term predictability as they decide where to put capital.”³⁹⁰ Put differently, the business community may accept the increased costs posed by compensatory mitigation requirements to the extent that those costs are sufficiently certain.

The value of certainty and predictability militates in favor of developing compensatory mitigation policies through planning or general implementation decisions, rather than at the final stage of a project approval, where possible.

more than seventy years, have created an expectation on the part of traditional federal lands ranchers that they hold grazing privileges as private property rights”).

³⁸⁷ David J. Hayes, *Addressing the Environmental Impacts of Large Infrastructure Projects: Making “Mitigation” Matter*, 44 ENVTL. L. REP. 10,016, 10,016 (2014).

³⁸⁸ See Margaret S. Race & Mark S. Fonseca, *Fixing Compensatory Mitigation: What Will It Take?*, 6 ECOLOGICAL APPLICATIONS 94, 95 (1996) (describing arbitrary wetlands mitigation process that “all but guarantees opposition and legal challenges from developers, who generally feel that current wetlands policies are unfair and inequitable anyway”).

³⁸⁹ See Pidot, *supra* note 27, at 180–83 (discussing economic uncertainty).

³⁹⁰ Heather Richards, *Wyoming Governor Concerned by Anticipated Sage Grouse Changes*, CASPER STAR TRIB. (Oct. 2, 2017), http://trib.com/business/energy/wyoming-governor-concerned-by-anticipated-sage-grouse-changes/article_794ed2b4-1414-5ca3-a207-bb32fd5241f7.html [https://perma.cc/4V26-JECK].

Consider again the numerous administrative steps required to authorize oil drilling on public lands—amending an RMP, allowing exploration, leasing, and authorizing drilling.³⁹¹ Embedding mitigation measures in land use plans, or lease offerings, will enhance fairness and consistency.

CONCLUSION

Compensatory mitigation is a vital component of many federal environmental programs and has been used broadly by land use planning agencies to address externalities connected to permitted activities. This common-sense approach that requires actors to address the harms they cause comfortably fits within the authority that FLPMA delegates to the BLM. Recognizing the BLM's authority does not, by itself, solve use conflicts on public lands. Questions and controversy will remain about when compensatory mitigation is appropriate, and to what extent. It is, however, an important start. Once the BLM recognizes the possibility of requiring compensatory mitigation, it can commit itself to the task of establishing a fair, consistent, and effective compensatory mitigation program.

Moreover, the concept of compensatory mitigation could be deployed beyond its traditional environmental domain. The Multiple Use Mandate does not elevate one use above all others. Compensatory mitigation measures could offset harms to other uses, like the forage available to a rancher, or the access available to a recreationist. Consider a rafting company seeking a Special Recreation Permit to operate trips along a stretch of river that serves as an important watering hole for livestock. If the presence of boats and people will degrade the river for ranchers, the BLM could use compensatory mitigation to require the rafting company to construct an alternative water supply.³⁹² Similarly, a company that built a mine across a trail providing access to backcountry recreational opportunities, could construct a trail elsewhere leading to the same area. Authority to require mitigation for non-environmental harms may, however, be somewhat less because the Anti-Degradation Mandate, which targets only land degradation, would seem inapplicable.

Despite the promise of equitably allocating federal resources, forging compromise and consensus, and facilitating economic *and* ecological interests, compensatory mitigation finds itself in the cross-hairs. It has been swept up in a resurgent politics predicated on the belief that economic liberty trumps pub-

³⁹¹ See *supra* notes 226–232 and accompanying text.

³⁹² See 16 U.S.C. § 6802(h) (2018). While the BLM may only collect fees from the general public for recreation in delineated circumstances, it may require a special recreation permit and impose an associated fee “for specialized recreation uses of Federal recreational lands and waters, such as group activities, recreation events, [and] motorized recreational vehicle use.” *Id.*

lic values like environmental protection. In a moment when many equate compromise with surrender, it has few champions.

Public lands demand better, and often, they have received better. Americans across the political spectrum love public lands. Ensuring the health of public lands for future generations transcends political party, as demonstrated by the strong bipartisan support for the current public lands bill recently passed by the Senate.³⁹³ Compensatory mitigation, in the right circumstances and under the right conditions, offers an important instrument to forge further consensus and compromise.

³⁹³ See Eilperin & Grandoni, *supra* note 51.